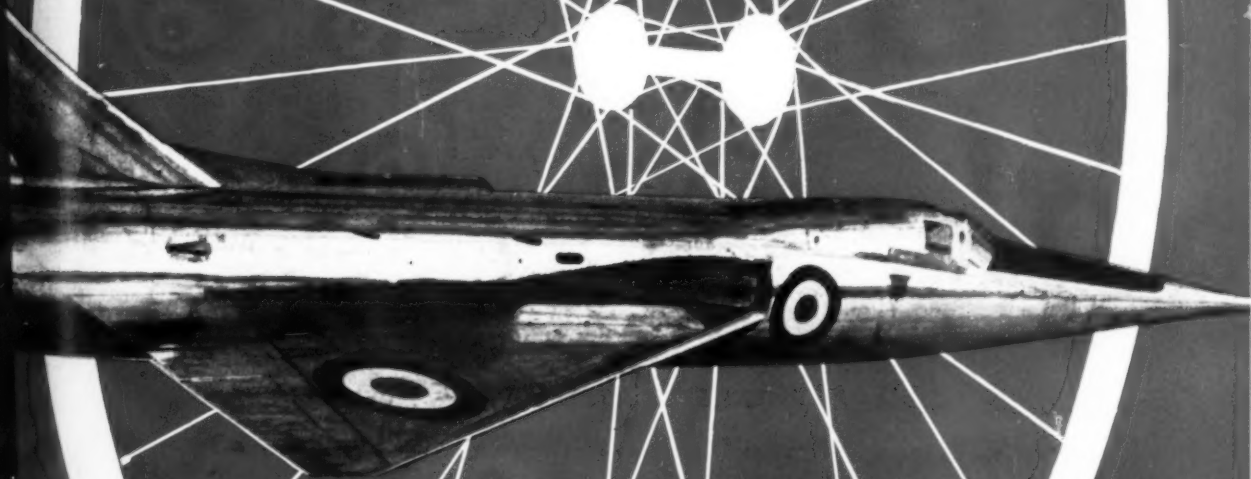


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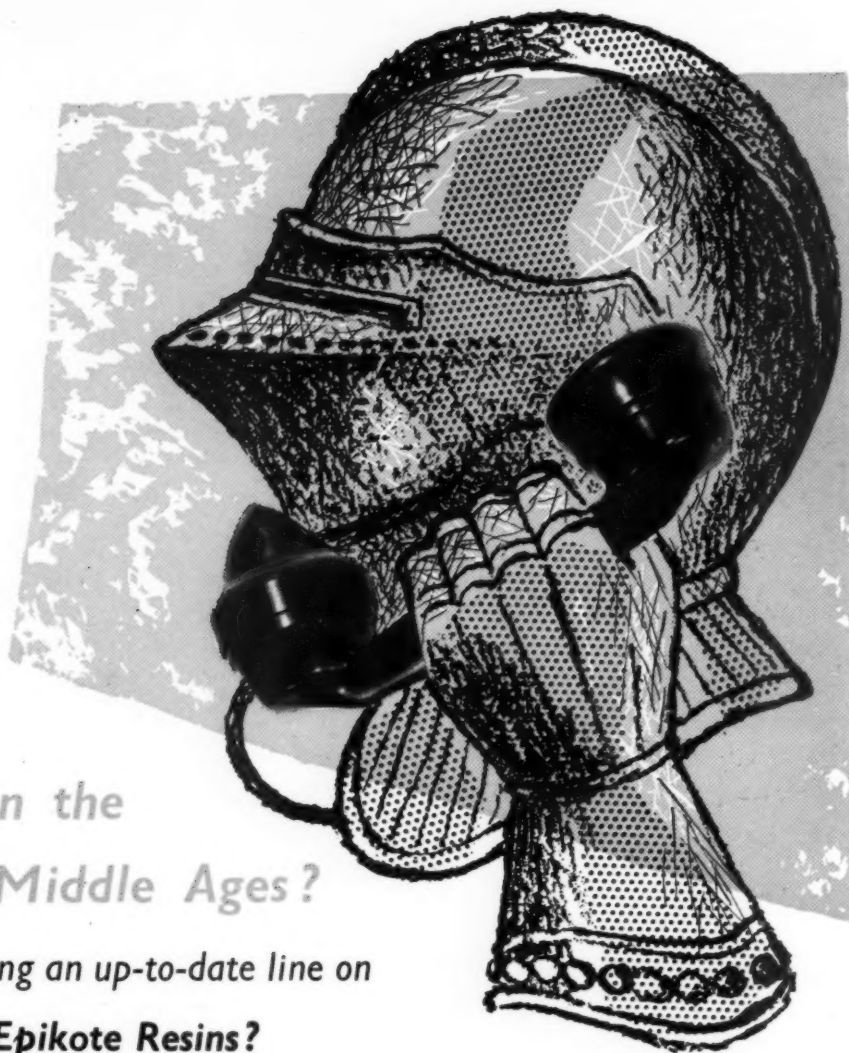
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Sir Gordon Russell

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J. Noel White

Peter Hatch

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Kenneth Garland

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John E. Blake

EDITORIAL ASSISTANT

Gillian E. Naylor

PRODUCTION

Aubrey Hewitt

STAFF PHOTOGRAPHER

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BUSINESS MANAGER

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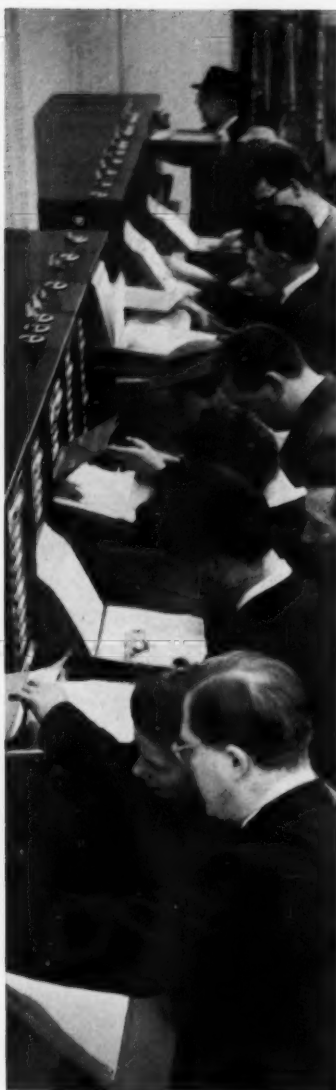
After a fashion

THERE HAS BEEN a great deal of heart searching recently about the acceptability of British products in foreign markets. At least one of our industries has been exposed to some hard words from countries as far apart as Sweden, Switzerland and Australia. The similarity of the reports gives the impression that British manufacturers are too much inclined to say 'take it or leave it'. We must not therefore be surprised if, despite the traditional goodwill towards Britain, some of our prospective customers decide to leave it. The maker of mass produced goods is increasingly committed to expanding markets, and that generally means selling goods abroad. The progress from the regional to the national market was one of the early features of industrialisation; the next move from national to international markets is already a near reality which is being brought into sharp focus by automation.

If Britain is to win her share of this international market, she cannot afford to sit back on her heels. To quote The Duke of Edinburgh at the opening of The Design Centre, "It is no good shutting your eyes and saying 'British is best' three times a day after meals and expecting it to be so. We have got to work for it, by constantly criticising and constantly improving". The goods we offer must be the goods which the customer wants and just that much better value in design and finish than anybody else's. It is one thing to defy current styles in favour of sheer price and utility, as the Germans have done courageously with the 'Volkswagen', but it is quite another to tag along with the vestigial trimmings of an already outworn fashion. Such half measures invite a half-hearted response. Fashion is becoming a problem in many industries which hitherto have been relatively immune from her advances. Manufacturers who accept her blandishments and the lure of planned obsolescence must face the fact that designing with a fashion slant is a matter for skilled designers of wide and up-to-date experience.

Selective displays such as The Design Centre can act as a clearing house for new ideas; but there is no substitute for the enterprise and discernment of the manufacturer who has the foresight not only to travel abroad himself to study the market and sense the spirit of the times, but is also prepared to take his designer so that he can have first-hand knowledge of the problem to be solved.

In the conditions which are developing we must make full use of those designers who can rapidly profit from experience of this sort, so that manufacturers, having picked the right man and entrusted him with their full confidence, can derive the inspiration which is essential if British goods are to win first place in international markets.



The public chooses

Mid-day queues are being formed to see The Design Centre. Its popularity has even surprised the organizers, the CoID, and numerous enquiries about exhibits have been received from visitors.

'Design Review', the photograph and sample record shown above, is a steady attraction which, to avoid congestion, has had to be restricted to professional buyers and persons with specific enquiries.

Visitors to The Design Centre during its first three weeks totalled 67,694

INTUITION versus MATHEMATICS

'If it looks right, it probably is right'.

An old engineering adage

'An object of utility which is perfectly proportioned for its job is invariably visually pleasing'.

A contemporary aphorism

MANY PEOPLE BELIEVE that beauty and structural efficiency go hand-in-hand. Modern bridges and other graceful engineering structures are frequently cited as examples of products whose sculpturally attractive lines have been the by-product of calculation. Others remain unconvinced of the validity of mathematical-artistic arguments and suspect that engineering designers as well as industrial designers depend a great deal more on instinct and a great deal less on calculation than most of them care to admit.

The most tempting source for evidence of any relationship which might be said to exist between sculptural appearance and structural efficiency is the aircraft industry. What does the evidence show? It is unlikely that all connoisseurs of form would ever agree on the merits of a given shape, but since the streamlined profiles of subsonic aircraft have tended to resemble typical aquatic animal and organic forms, then it is reasonable to assume that the appearance of most of the aircraft developed during the last two decades has been found pleasing to the majority of beholders. Man, the organism, is inclined to approve of shapes which echo the pleasanter aspects of his environment. The very latest supersonic aerial vehicles, however, have passed beyond the stage where they slide freely through an easily displaceable fluid and must be forced through an atmosphere which, at these speeds, is relatively as resistant as treacle. Indeed, some of them must cleave their way as if through a solid medium. Their shapes have therefore begun to resemble cutting tool or crystalline forms. Many people consider these to be far less pleasing. However, the aircraft industry has tended to set the fashion for industrial styling, and popular tastes are already showing signs of following the 'crystalline' trend.

Is there any relationship between the appearance and efficiency of aircraft forms? To the extent that aerodynamic lines are pleasing lines, it can be said that the aerodynamically more efficient aircraft may also

L. BRUCE ARCHER

The first article in a series on design and stress analysis in engineering

When a designer in industry receives his brief it is seldom admitted that the product can have no form at all until some person has put forward a hypothetical conception. Only then can the design be analysed and modified scientifically in terms of materials, construction, function and durability.

Intuition plays a large part in the creation of a basic form, yet the art-trained designer rarely gets the opportunity to use his special talent at the initial stage.



Bristol 'Britannia'

At speeds between 150 and 600 mph aircraft are travelling through a medium which, though readily displaced, demands smooth curves to minimise energy consuming turbulence. They therefore tend to resemble aquatic organic forms. The Bristol Aeroplane Co Ltd.

Fairey 'Delta' II

At supersonic speed, an aerial vehicle must force its way through a medium which has no time to react like a normal fluid. Supersonic shapes therefore tend to resemble cutting tool or crystalline forms. The newest aircraft designs, not yet released for public showing, may set an entirely new standard for the appearance of industrial designs. The Fairey Aviation Co Ltd.



Comparison

Streamlining, in its technical sense, is a quality to which the eye is very sensitive. Without any knowledge of aerodynamics the ordinary reader will be able to make a shrewd assessment of the relative qualities of these designs. From top to bottom: English Electric 'Canberra', De Havilland 'Mosquito', Avro 'Lancaster', Gloster 'Javelin', Bristol 'Beaufighter'.

be the better looking. Within obvious limits the converse is also true. It is possible for a lay observer, judging by visual standards alone, to select from a set of aircraft models the one which he likes the best, and to find out afterwards that it is aerodynamically the superior. Indeed, aircraft designers are compelled to allow a substantial measure of visual judgment to enter into their work. This is because the mathematical and experimental methods available to them are primarily intended to reveal the probable points of failure in a design and the conditions of imposed loading at which failure is likely to occur.¹ It is necessary that a hypothetical design shall first be laid down before analysis can begin. Even when the calculations are complete, the results which identify the weaknesses of the design do not point to the ideal solution because each mathematical solution is unique;² i.e. the result applies to the given hypothesis only and to none other. The use of electronic computers to execute a series of such analyses, and thus to derive a trend which would point to an ideal solution, is only just becoming feasible and yet might never be attainable because of the large number of variable factors which are not always interdependent. The vast mathematical and technological effort which is associated with aircraft development, is therefore devoted primarily to the analysis of the probable characteristics of proposed designs, rather than to the determination of ideal forms. In this field, at least, it would be a mistake to attribute any attractive sculptural forms which might be present to the inexorable laws of mechanics.

Rule-of-thumb solutions

A variety of methods for structural analysis has been evolved by the aircraft industry. Most of them involve basic approximations and assumptions which cannot be estimated with the degree of accuracy which many people in the industry itself would wish.³ However, aircraft standards are extremely exacting and even the methods now scorned by the industry could be of immense use to designers in other fields. How are the problems of structural design dealt with in other industries? The design of the under water hulls of ships involves problems very similar to those found in aircraft design, but the standards are very different. Rule-of-thumb methods are used to evolve the basic hull form which is modified in tank tests.⁴ Weight-saving, though significant to draught and fuel consumption, is not an urgent need and relatively little stress analysis is carried out, although some high speed small craft have been developed very fully. Mr H. L. Cox has examined the relationship which should exist between areas of ships' hull plating and their stiffeners, and has concluded that in at least some cases the rules-of-thumb give substantially correct results. The full implications of scale effect during experiments with models,⁵ and upon the application of normal formulae to very large structures,⁷ are still obscure. There is a marine engineering product,

1 J. B. Hartman and R. E. Brenner 'Limitations of Theoretical Methods', 'Machine Design', April 1954.

2 S. Timoshenko 'Strength of Materials', D. Van Nostrand and Co Inc, 1949.

3 H. T. Jessop 'The Scope and Limitations of the Photoelastic Method of Stress Analysis', proceedings of the Royal Aeronautical Society, November 1952.

4 Sir Westcott Abell 'The Shipwright's Trade', CUP, 1948.

5 H. L. Cox, senior principal scientific officer, National Physical Laboratory.

6 British Shipbuilding Research Association and the National Physical Laboratory, 'Ship Model Performance Comparisons', proceedings of the Institution of Naval Architects, 1954.

7 Dr A. A. Wells 'Influence of Size and Shape on the Testing of Materials', proceeding of the Institution of Mechanical Engineers, March 1956.



21-ft diameter ship's propeller

Ships' screw propellers operate under conditions of severe vibration and transmit tens of thousands of horsepower. Their stresses and hydro-dynamic profiles have been exhaustively analysed and their design is usually based on advanced mathematical techniques. Manganese Bronze & Brass Co Ltd.

Design: Number 90



British Standard crane hook

An intensive investigation has been made into the design of standard crane hooks and a theoretically perfect form has been evolved. Tests have proved that hooks designed in accordance with the theory are so uniformly stressed that ultimate failure can occur by plastic flow at almost all points simultaneously.

however, which is said to have been developed to a stage where it is very close to the theoretical perfect functional and structural form. This is the screw propeller.⁸ Extensive tests have been performed to determine the perfect hydro-dynamic profile and since a large propeller might have to transmit 50,000 hp or more under severe vibrational conditions, great care has to be taken to achieve a state of substantially uniform stress within the propeller itself. It has been found that mathematical, hydro-dynamic and stress-concentration predictions are generally confirmed under trial.⁹ This is one of the few available examples of a form which is genuinely the product of reliable calculation based on scientific principles.

Less exciting from the visual standpoint, but also structurally close to the theoretical ideal is the British Standard crane hook.¹⁰ Like any other structurally efficient object a perfect hook has no portion of its material which is stronger or weaker than is required to support its share of the total burden. At the moment of failure the object should yield at all points simultaneously.¹¹ In practice, of course, there is always present some slight metallurgical or mechanical defect such as a local lack of homogeneity or a surface flaw or scratch. The defect causes one or more points of greater stress concentration so that when the object is strained to its elastic limit the yield or fracture commences at these points and spreads progressively across the section. The British Standard hook has been exhaustively tested and the accuracy of the calculations has been demonstrated.¹² This, and the propeller, are the only examples which could be found of forms which are entirely the by-product of calculated functional design.

Factors which govern appearance

British cranes considered as complete structures do not live up to the example of their hooks. Although some outside forces, such as the effects of high winds, are sometimes important and are occasionally investigated, the essential structural requirements are relatively simple and would seem to lend themselves to complete and accurate evaluation. Nevertheless, in the majority of British crane designs, the proportions of the structural members appear to be governed more by a desire to reduce the number of different sections employed than by any aspiration towards the correct theoretical dimensions. Research has shown¹³ that a reduction in weight and therefore an increase in structural efficiency should frequently be practicable by giving more attention to detail design. In most cases the analysis of the complex box structure forming the crane bridge is reduced to the simplest possible formula which neglects the distribution of loading throughout the structure as a whole.¹⁴ The fact that most of these cranes are also visually formless may or may not be significant. Crane builders are understandably unenthusiastic for adventurous designs and when changes are made it is generally because the purchaser insists for some

⁸ 'Modern Propeller Forms': transactions of the North East Coast Institution of Engineers and Shipbuilders.

⁹ National Physical Laboratory, 1954 Annual Report, HMSO, 1955.

¹⁰ 'Hooks for Cranes' BS 482:1950, British Standards Institution, 1950.

¹¹ A. M. Freudenthal 'The Inelastic Behaviour of Engineering Materials and Structures', John Wiley and Sons Inc, 1949.

¹² H. J. Gough, H. L. Cox, D. G. Sopwith 'The Design of Crane Hooks, etc': proceedings of the Institution of Mechanical Engineers, 1935.

¹³ The British Iron & Steel Research Association, 1954 Annual Report, p 47.

¹⁴ Ibid, 1954 Annual Report, p 46.



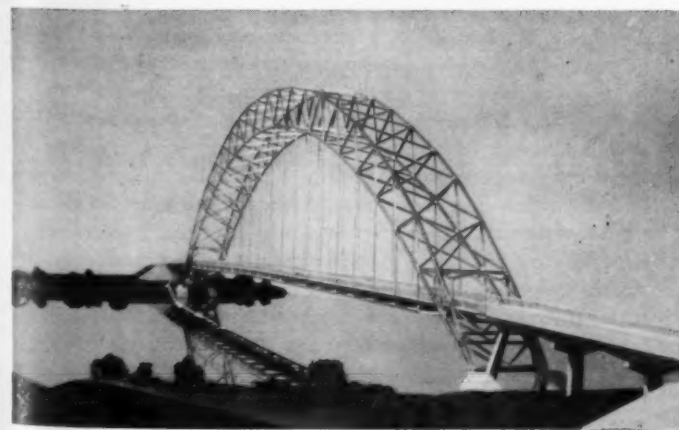
◀ 15-ton overhead travelling crane

This is one of the rare examples of a crane designed in accordance with advanced civil engineering theory and incorporating modern methods of construction. Both the appearance and the structural efficiency of this crane are far in advance of prevailing general standards, largely because the design consultant was Gilbert Roberts, whose work is characterised by a high aesthetic standard. J. H. Carruthers & Co Ltd.



▲ Theoretical and normal beam

The lightest beam to support a given load should theoretically conform to the left hand section. The proportions of the parts would vary according to the nature of the load. In practice the weaker but more convenient I-beam is generally used.



▲ Ponte-Tubo di Gardona

This bridge designed in reinforced concrete is based on advanced integral structural theories instead of the simple pin-joint theory commonly used. It is considered to be a good example of visually beautiful and truly functional design. Carlo Berghini.

◀ Model of Volta Bridge, Gold Coast

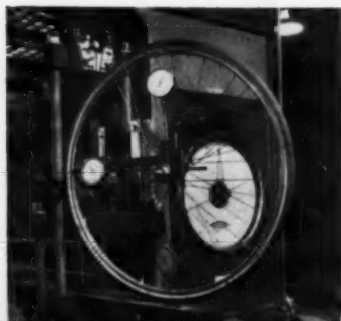
The outer curve of the main beam is of parabolic form. The inner curve is a modified parabola terminating at each end with a straight tangent. To be structurally perfect the depth of the beam at the top centre should be shallow, increasing to maximum depth at the two top quarter points, but this form was rejected for aesthetic reasons. Sir William Halcrow and Partners, and Freeman Fox and Partners.



Bicycle wheel

Hand built by Montgomery Young of Condor Cycles

Probably the strongest man made structure relative to its weight is the bicycle wheel. Most high performance racing wheels are hand built from factory made components by craftsmen specialising in this trade. The accepted proportions closely conform to the theoretical optimum, but none of the builders and only a few of the component manufacturers have investigated the matter very deeply. One of the finest British sprinting wheels, weighing only 27 oz, was specially built by Montgomery Young of Condor Cycles, and tested for DESIGN by Dr B. J. Zaczek, who reported that an axle load of more than 1200 lbs was sustained before slight inelastic distortion occurred. This is more than 700 times the weight of the wheel. The tyre, inflated to 120 lbs per inch was compressed flat at the area of contact at an axle load of 400 lbs, but ignoring this the wheel could safely sustain a working load of 700 lbs under smooth riding conditions. This gives the astonishing load/weight ratio for safe working of 400:1 which represents exceptionally high structural efficiency. Below, the wheel on the test rig.



reason of his own upon the use of some new material or method of construction. In such cases there is often a serious attempt to rationalise the design and to develop a new form, but there is evidence that the desire to adopt a 'modern' shape often plays a greater part in its evolution than the use of any advanced methods of stress evaluation.

Bridge design is similar in its mathematical problems but is beset by different disabilities. The basis of the general profile is usually dictated by the economics of erecting various types of structure under the peculiar conditions of the particular site. A considerable amount of detail is circumscribed by government regulations,¹⁵ but the appearance factor plays an important part for its own sake. The profile is set out according to some suitable geometrical form, chosen largely for its visual appeal. The sizes for the individual structural members are then determined. The exactness of subsequent stress computation varies from one firm of designers to another, but the procedure is undoubtedly more in the nature of the analysis of proposed sections for the elimination of danger points, than the evolution of forms by scientific methods. An interesting side-light on structural members reveals that the theoretical cross section for a beam consists of a hollow tube above connected by a thin membrane to a small solid rod below.¹⁶ This has a very 'modern' look about it, but is seldom used

¹⁵ Ministry of Transport 'Memorandum on Bridge Design and Construction', HMSO 1945.

¹⁶ H. L. Cox, senior principal scientific officer, National Physical Laboratory

because of the absence of suitable flat bearing surfaces.

The adoption of reinforced and pre-stressed concrete as structural materials has made variable cross section design both easier and more desirable. Research into the structural characteristics of concrete is hampered by the difficulty in evolving effective reduced-scale tests. Some European civil engineers are making considerable progress in design in concrete and claim a close approach to uniform stress, which enables them to reduce greatly the volume and cross sectional thicknesses of their structural members. To what extent the contemporary aesthetic idiom has imposed itself on these designs from the outside and how much has been logically developed from within is very difficult to judge. Civil engineers and architects are familiar with current art forms and it cannot be said that they are unconscious of the appearance of their designs. It is doubtful if the forms they produce are wholly or even largely the accidental by-products of calculation.

Examples of high structural efficiency in addition to the bicycle wheel, described on page 18, are few and far between. Although the achievement of perfect distribution of material throughout a product would lead to longer component life, fewer accidents, and a considerable reduction in the weight of materials used, little attempt is made to consider the structural efficiency of the majority of engineering components. This is true not only in the field of consumer goods but also in connection with products of life-and-limb significance. In the words of Colonel Jessop:¹⁷

"It is only when something breaks and somebody gets hurt that the majority of firms make anything like a thorough design analysis."

The truth of this statement is often overlooked. Sales literature will state that a product has been designed on scientific principles. More often than not this claim is untrue, but the advertising department is not necessarily at fault. The design office is more likely to have succumbed to the temptation of believing that its inspired guesswork is infallible or that the simplified formulae to be found in standard drawing office handbooks are universally applicable. Many influences have conspired to depress the standards of technological design prevailing over wide sections of British industry to a much lower level than the country can afford to tolerate. The methods of calculation³ and experimentation¹⁸ generally used are unsatisfactory and unreliable. The current urge to improve and extend higher technological education is a recognition of the fact.

The inescapable conclusion is that the aesthetic qualities of any product reflect the sensitivity of the designer rather than the purity of his mathematical solutions. This is the justification for the employment of art-trained industrial designers in consumer goods industries, and, for the sake of indirect benefits, for the inclusion of more cultural subjects in the training of scientists and technologists.

The attainment of a high degree of mechanical and structural efficiency in any product requires greater use of sound analytical procedures and less reliance upon rules-of-thumb than is at present practised. Subsequent articles in this series will examine the present state of design research and will introduce some of the practicable analytical procedures now available to product designers.

¹⁷ H. T. Jessop, reader in photoelasticity, University College, London.

¹⁸ K. A. Brownlee 'Industrial Experimentation', Ministry of Supply, HMSO, 1949.



Aluminium and glass fibre frame for settee

All products are composed of structural members, but incredibly little design research has been carried out to determine the basic shapes which represent maximum structural efficiency and therefore the minimum proportions available to the designer. This American design demonstrates the structural influence, though it is far from being an example of a uniformly stressed structure. Designed by D. Lee DuSell.

For this series of articles the author has conducted extensive researches into the design techniques employed in a variety of industries. Grateful acknowledgments are due to the following for their valuable assistance:

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Partnership Ltd
'The Aeroplane'
University College, London

Thought for food

ANTHONY ADAMS

The Corner Houses of J. Lyons & Co Ltd have a long tradition of providing Londoners with meals in comfort and at reasonable prices. But in recent years it was felt that the public would appreciate a wider choice of food, price and surroundings. As a result, eleven new specialised restaurants have now been opened.

THE CORNER HOUSE RESTAURANTS offer a restricted menu within a specific price bracket and, it is claimed, provide value for money in a quiet atmosphere which gives the customer a sense of luxury. Designed under the supervision of Samuel Horwitz, an American experienced in restaurant layout and specialised catering, the 'Grill & Cheese' at Coventry Street is more economical to run than larger units, and the interiors have been designed to keep down maintenance costs.

'You pays your money and you takes your choice' would be an apt way of summing up the policy behind these new restaurants. The higher the price of a meal, the more time is likely to be taken in eating it, so the layout and decoration for one type of meal may be unsuited to a different type. The average time spent by each customer in the 'Grill & Cheese', where a meal costs at least seven shillings and sixpence, is 53 minutes; in the 'Wimpy', where you can have a snack for two shillings, the time is 17 minutes.

'Grill & Cheese'

In interior decoration, the 'Grill & Cheese' at Coventry Street is the most impressive and ambitious restaurant, yet in idiom it is typical of the approach adopted throughout. The dark ceiling carries recessed lighting which is adequate and unobtrusive. One wall faced in rough stone gives an air of spaciousness enhanced by the use of indoor plants. The black and white terrazzo flooring is, perhaps, a little unsympathetic, but full marks must be given to the designer for fitting rubber ends to chair and table legs to prevent noisy scraping. The tables are packed rather closely together, and this sense of over-crowding is increased

by two large pillars shrouded in black hopsack. Had these been covered with the pale mahogany panelling used on the walls, they would have been less assertive.

The chairs of beechwood contrast pleasantly with the darker 'Formica' table tops, but one wonders why it was necessary to heighten the contrast by fitting the chairs with drab green cushions and covering the banquettes in a red 'Vynide'. Tables of simple design are sensibly mounted on central pillars, so that there is room for knees, handbags and parcels. The chairs, on the other hand, of pseudo-farmhouse style, are fussy in construction and, except for their comfort, fall far short of a good modern style. In stark contrast to the general effect is the pottery - a mediocre pattern of pink roses on a white ground, very much out of keeping with the surroundings. Too much gold metal on doors and the bar, which separates the restaurant from the adjoining 'A la Carte', tends to give the room a rather shrill note.

Oxford Street Corner House

The entire ground floor at the Oxford Street Corner House has recently been redesigned, and the largest section is the 'Restful Tray'. Here, a sense of spaciousness has been achieved by light wood wall panelling and a well designed carpet with a strong red motif. Attractive blue and pink table tops add a cheerful note, but the design of the ceiling is restless and there is a general air of too much chromium. The 'Bacon & Egg' is charmingly decorated with 'Formica' murals in pink, white and blue. These are matched by the table tops which have a pig and chicken design in grey, pink and white; though why green china was chosen to go



▲ A good letter form, simply displayed in white, gives dignity and repose to the restaurant entrance. Use of plate glass doors enhances the spaciousness of the interior.

◀ Corner Houses are almost always crowded, but here the simplicity and touch of sophistication prevent that feeling of someone breathing down your neck.

Colour, good lighting and a consistently modern idiom provide stimulating surroundings at the Coventry Street 'Grill & Cheese'. The table tops are veneered with 'Formica' laminated plastic.





▲ *Less chromium would have made the 'Restful Tray', designed by Lutyens and Greenwood, more restful to the eye; nevertheless, plain wood panelling and pleasant colours establish luxury without vulgarity.*

This fascia makes use of a letter form similar to the 'Perpetua Bold' typeface recently adopted in the company's packaging.



▼ *Variations in pink, black, white and blue are used for the attractive 'Formica' mural panels in the Oxford Street 'Bacon & Egg'.*



with them is a mystery. The design of the metal frame chairs adds a touch of garishness, and also produces an uncomfortable seat.

Another new restaurant in this building is the 'Trolley' where light wood panelling is again used for the walls, and the upholstery is in deep red plastic. Ornamentation is kept at a minimum here, but the carpet, emerald green, black and yellow, and patterned with 'JL' initials, is rather gaudy, and the occasional squares of blue and primrose in the biscuit coloured ceiling seem haphazard.

An outstanding feature of the new restaurants is the sense of quiet, unusual in London eating houses. All the ceilings are sound insulated and successfully quell buzz and clatter. Against these modern forms and rich colours, the familiar dead black dresses of the waitresses are out of key.

Staff designer's contribution

Design of printed matter has not been neglected, and an attempt has been made by Kathleen Darby and the company's design section to provide menus and notices suited to the character of each restaurant. The most successful menu, designed for the 'Restful Tray', has a colourful free drawing supplemented by a wholly modern typographic treatment. Similar typography is used in the 'Wimpy' menu. The covers for the 'Trolley', 'Grill & Cheese' and 'Bacon & Egg' menus achieve an evocative richness – they are sensibly encased in a plastic laminate to avoid finger-marking – but their internal typography is less successful.

There is no doubt that these new restaurants are a

Simple typography, easy to read and used in the modern manner, is the keynote of these menus designed by Kathleen Darby. In that for the 'Wimpy', where proper nouns are not required, a good case could be made for dispensing with capitals, which always make Gill Sans' type rather chunky.

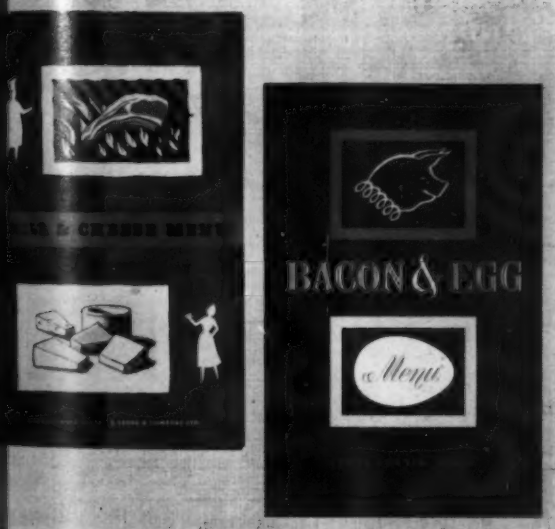
Bold Egyptian lettering for the 'Grill & Cheese' chosen by Kathleen Darby is exactly suited to the rich colours and bold drawing. Poor script for the word 'menu' and the vulgar out-of-character ampersand spoil the simplicity of the 'Bacon & Egg' menu, designed by Arnold Rotholz.



marked improvement on the earlier design and decoration of the Corner Houses. This change from 'mass feeding' to smaller units which express more individuality and demand greater discrimination can only lead to improved standards – in both eating habits and appreciation of surroundings – and for that Lyons deserves praise. From an aesthetic viewpoint, however, one feels that there has been too much compromise between good taste and a striving after luxury, and that those responsible have lacked discipline. The designers had a wide choice of wood, fabrics, metals, hard plastics and new materials such as 'Vynide', and they have failed to balance the relative merits of each. Many elements, good in themselves, are thrown together haphazardly, and some of the colours have been ill matched.

Nevertheless, Lyons is to be congratulated for providing surroundings of a higher-than-average standard, in which a modern idiom is marked, and colour and richness are universal. It is cheering, too, that this new approach to design is likely to spread throughout their establishments. Unfortunately, owing to the nature of the company's organisation, and the wide variety of its activities, no over-riding house style is evident, and none is envisaged; but perhaps that is inevitable in an organisation serving such a multitude of masters.

◀ The strong and cheerful drawing and bold colours make the 'Trolley' menu by Kathleen Darby attractive; but why the garland round the name?



THINGS TO COME?

Architects and industry look into the future

Seen here without its multi-curved roof whose rise and fall is indicated by the switchback line of the edge beam, HoF'56 reveals the sculptural and labyrinthine qualities of its interior. In the immediate foreground is the dressing room, with its pedestal hand basin.

REYNER BANHAM



Trends in house design 25 years hence were forecast by Alison and Peter Smithson in the 'House of the Future', an exhibit at the recent 'Daily Mail Ideal Home Exhibition'. Though revolutionary in appearance this house reinforces practices which already exist in embryo. The growing importance of collaboration between architect and technician was apparent throughout the design, particularly in domestic appliances where technological development is likely to be extensive, and accurate forecasting thus more difficult. The use of integral construction points to fundamental changes in the furniture industry and to the replacement of some individual movable pieces by built in units. The house can be seen again at the 'Scottish Daily Mail Ideal Home Exhibition', Edinburgh, June 29-July 14.

UNLIKE THE DREAM KITCHEN and the dream car, which are among the most tempting prizes that contemporary industry can dangle before a lagging consumer response, the dream house has lately lapsed into little more than a codification of the status quo. Yet visionary reformulations of the domestic pattern were regular in, say, the late 'twenties - Le Corbusier's 'Pavillon de l'Esprit Nouveau' of 1925, Buckminster Fuller's 'Dymaxion' house of 1927-9, the Duncan-Bovis house at the 'Ideal Home' of 1928, Mies van de Rohe's Berlin exhibition house of 1930-1.

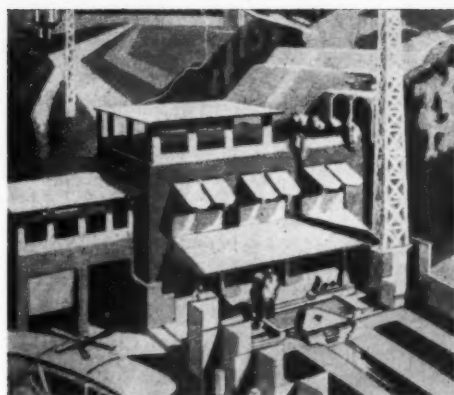
This was an impressive record of aesthetic and technical exploration; but with the slump the bottom fell out of the dream market, and while a few industries - aviation, automobiles - managed to cherish their dreams and eventually re-emerge as the colossi of the second Industrial Revolution, in architecture and building there grew up a tradition of offering only the commonest known solution when faced with the challenge of the mass market.

The 'House of the Future' this year marked, one hopes, a real break with this dullard's approach. Commissioned by the exhibition organisers, designed by Alison and Peter Smithson in close collaboration with appliance, equipment and material manufacturers, it offered the public new aesthetic and planning trends and new equipment, as inextricably tangled together as the styling and engineering novelties on a new car.

Architect/technician collaboration

The date given as a general reference was 1980, which was felt to represent the maximum useful range of technical prophecy; the architects envisaged their own possibilities with a house structure of a material which could exist tomorrow - moulded resin-bonded plaster - but which will not exist commercially until there is a big enough market in factory built houses to amortise the high cost of plant. Failing the availability of the material, its aesthetic possibilities (continuous translucent moulded surfaces running uninterrupted over floor, wall and ceiling) had to be faked by normal exhibition builders' techniques.

However, if the architects jumped right on to their target date the performance of the component and equipment suppliers was variable,



The 'House of the Future' is not an unprecedented exhibit at the 'Daily Mail Ideal Home Exhibition', for in 1928 Bovis Ltd sponsored a project under the same title, designed by R. A. Duncan, which included technical prophecies, such as plastic structure, which still await realisation.

Photograph by courtesy of 'Arts and Architecture'.

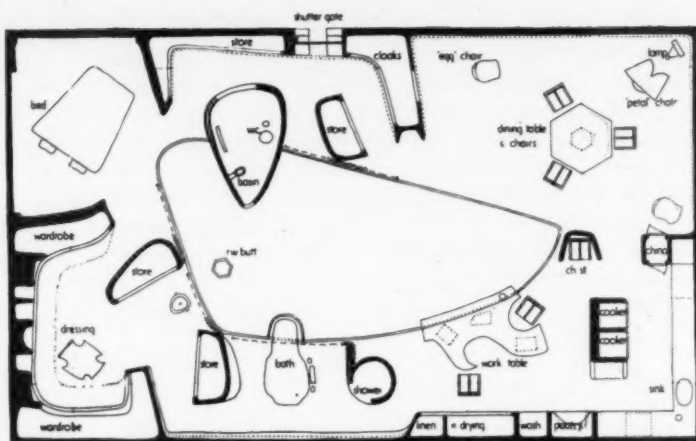


Though the proposed structure of HoF'56 - resin-bonded plaster - is only an imaginative extension by the architects of techniques already in use for making bonded sand moulds, some plastics firms also are studying the possibility of house structure mouldings. Monsanto, USA, for instance, has a project, above, for cantilevered room units which, unlike the elements of HoF'56, would be identical and stackable for transportation. Another all plastic house, bathroom below, designed by Ionel Schein, was shown at this year's 'Salon des Arts Ménagers' in Paris, and has many similarities to HoF'56.



In plan, HoF' 56, has its living space looped around a garden-patio and no external windows. Apart from the side containing the entrance, its walls are unpierced and could be busted up against other similar houses on three sides, to give a close knit pattern of high density single storey housing. Projects for such concentrated patio house developments are being widely discussed at present. With their inward turning plans, focused like a Roman house on an inner court, they offer standards of privacy unknown in conventional western housing, while whole streets of their anonymous façades, interrupted by open spaces and community services, might bring a new 'urbanity' to suburban areas, a type of townscape unknown north of the Mediterranean.

Plan by courtesy of 'The Architect & Building News'.



The living room occupies the whole of one corner of the house and has the largest view of the garden; the roof rises at this end to admit maximum light. Through the window – unglazed for exhibition purposes – can be seen, left to right, the 'clean-work' top, the

projecting end of the bath, and the dressing room. The living room table has been raised to full dining height; it can be set at a lower, coffee table level, or sunk flush with the floor. The service trolley is seen open, ready for table laying. The chair drawn up to the

table is the 'Pogo' folding and stacking type, deliberately envisaged as a relic of pre-plastic fabricating technology. Those around the TV screen are two 'Egg' chairs and one 'Petal' lounging chair. Large 'dice' on cushion is a remote control unit for radio and TV.



both in range and power of conviction. The most socially desirable feature of the design – destruction and disposal of organic wastes on the premises – had been anticipated in Fuller's 'Dymaxion' house almost 30 years ago. The most startling technical innovation, the electrostatic dust-collector, exists already in workable form, but ultrasonic laundering, which an intelligent follower of technological development might expect to find, was notably absent. The largest piece of laundry equipment was the drip-drying cupboard – part of the house structure to which the washing machine and the ironer (apparently family heirlooms from 1955) were merely mobile ancillaries.

Trends in cooking and food storage

A related state of affairs could be found in food storage. A small 'fridge took second place to a large store cupboard and provision of bulk spaces dominated the number of technical aids, suggesting that the architect is re-entering a field from which the technician had seemed likely to exclude him. Or, rather, architect and technician find themselves as closely embroiled as marriage partners. This appeared very clearly in the most elaborate piece of Hotpoint-Smithson co-operation, the design of cooking facilities.

The two largest units, the ovens, were banked up together in a free-standing unit which faced the work surfaces and the 'fridge. The ovens, one a high speed short wave instrument, the other more conventional, were existing American 1956 models, though they represent a type of equipment that the British housewife seems unlikely to get, or want, for a decade or more.

The rest of the cooking equipment was mobile, rather than permanently distributed. Fryers and saucepans envisaged as titanium spinnings had their own heating elements built into their bases, and could be 'wander-plugged' at various points around the kitchen to self recovering flexes dispensed from spring return drums, while a large trolley containing infra-red griller, toaster and heat storage for food and crockery could be plugged in at its normal resting position in the kitchen.

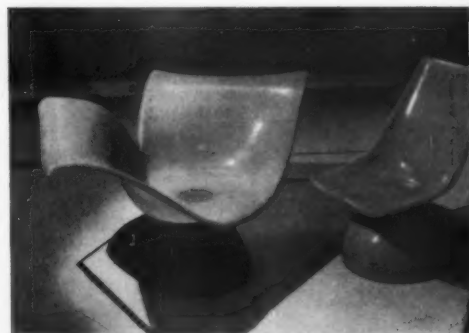
Experiments in reinforced plastics

The other main aspect of architect-specialist collaboration concerned plastics, and sinks and bath, furniture and wall fittings, were extensively realised in reinforced resins with the aid of plastics firms. Large continuous units were the general solution; as in the wall fitting in the dressing room, or in the chairs which were built of glass fibre mouldings. In these one saw those refinements, subtleties and revisions of form which come from actual experience of the material and its potentialities. Had such first hand experience been available in connection with the house structure it might have had qualities analogous to those other skin structures – natural, as rhinoceros hides; technological, as automobile panelling – which the Smithsons had in mind when they conceived this structure and its aesthetic possibilities. Unfortunately such qualities were missing, but this fact is less to be regretted than some of the other things that misfired. Paradoxically, the weakest parts of the whole exhibit were those for which the fashion trade, which conspicuously lives by short futures, was responsible.

Unlike the cosmetic packs which struck a corny note, even by 1956



Looking down into the bathroom, one sees the discontinuous, jointed structure of the house, designed on analogy with jointed, moulded natural structures like a beetle's wing cases. To the right of the bath, a polyester fibre moulding forms the cubicle for shower and infra-red warm air drying, with rinsing and filling controls for the bath on its outer wall.



Apart from the steel framed 'Pogo' chairs, all the seating in HoF'56 is of the moulded shell type, with 'Petal', or bucket, seats bonded by a slightly flexible rubber joint to an egg shaped base. These chairs have aesthetic effects new to the domestic interior, such as the subtle and refined moulding of their turned-over edges and their glowing translucency.

standards, the food packages and dispensers contrived a remarkable air of probability. This conspicuous difference in prophetic conviction runs back, one suspects, to the degree in which the industries concerned are in touch with the mass market. Cosmetic manufacturers, of the type whose normal advertising medium is 'Vogue', hardly graze the surface of this market, whereas food packers are in it up to the neck.

Needs of the family market

And this raises a further and very fundamental point: how far was the exhibit as a whole in touch with the mass market? In some ways admirably; in the creation of the necessarily powerful and memorable visual image, for instance – and the Smithsons are probably better placed than anyone to do this, for they have been involved in recent studies at the Institute of Contemporary Arts into the way in which advertising reflects and creates popular aesthetic standards. The balance struck between obsolescence and permanence also showed a true sensitivity to popular values. HoF'28 for instance, was an expendable structure, and had expendable crocks, but HoF'56 had a dishwasher that rendered the latter feature pointless, and recognised that the prime domestic virtue – house-pride – resides in permanent possessions.

This is good, but surely the basic programme of the house, without rooms for children, was a fundamental mistake. Architects may explain to themselves that one bedroom can stand for all bedrooms (the organisers may have had pressing reasons for commissioning only a two-person house) but the mass market in residential shelter is a family house market, and not to have built this factor into the contract right from the start was to guarantee consumer resistance; a resistance that is aggravated by the clothes, and by the quite unbelievable attitude of the 'Daily Mail' editors in allowing a columnist to say, twice, "You'll hate this house".

For manufacturers and suppliers see p 55

The combined vanity and storage unit in the dressing room is a large single plastic moulding. When not in use it can be covered by concertina shutters like those covering other storage spaces; though it should be noted that where these doors are shown on curved tracks this does not represent current practical possibility. The 'saddle' chair, in front of the mirror, is again a plastic shell, but covered in white nylon fur.



◀ *The kitchen and workspace occupy almost a quarter of the floor area: the workspace open and uncluttered, the kitchen area close and compact. A view down the narrow catwalk between the ovens and the refrigerator, shows foodmixer and expendable ovenware, etc., in foreground, self-heating saucepans on shelf at end of galley, and oven doors. Ovens are American 1956 models, technically well in advance of available British equipment, but too conspicuously 1956 in styling for HoF purposes. Contrary to common expectation, only ovenware is expendable; other breaks with routine forecasts are: small 'fridge, large open food store; small mechanical type washing machine, large drip-drying cupboard: because new developments in food packaging and crease resisting techniques may reverse present trends in storing and laundering.*

Saucepans of recent design – practical and well finished. The plastic handles are moulded to fit the hand and hollowed on top to give the thumb a comfortable grip.

Good looks at the right price

JOHN GRAY

*How designs are developed
in aluminium hollow-ware
for table and kitchen*



DESIGNING INEXPENSIVE HOLLOW-WARE for mass production is at once simple and difficult; simple in the sense that there is a strict limit to the number of shapes that can be produced cheaply and plentifully without a heavy capital outlay on the tooling of presses; difficult because the home market generally is conservative and innovations, when mass produced, may be costly failures. This is particularly true of light metal teapots, which have inherited a strong aesthetic tradition from pottery and silverware, but also of entirely new products which, being kitchen goods, tend to be classified as gadgets.

One of the largest of the 75 British manufacturers, N. C. Joseph Ltd, of Stratford-on-Avon, has followed a progressive and entirely independent approach to problems of design for more than 30 years, specialising in aluminium products. Throughout this time the trade has been highly competitive and most firms have frequently introduced new models, especially when sales were stagnating or falling. Many Joseph innovations have been ahead of their time; not unnaturally they have had a mixed reception, doing well in new products like coffee percolators but less well in traditional designs for established and partly decorative products like teapots. On balance, sales of good modern designs have been sufficiently encouraging for the firm to continue its policy.

Not surprisingly, in view of its long design history, some of N. C.



▲
A selection of pre-war designs. The four at the top are well above the average for 1925 designs, functionally good but severe in style. Above, three kitchen utensils linked by the same moulded plastic grip to economize on tool costs; as a unified design the kettle is the more successful. Below, a pioneering but equally realistic design; it is sturdy and its wide base will cover any domestic gas jet. The handle has a long serrated large thumb rest, useful when pouring.
▼



Joseph's best models antedate the last war; a few are illustrated on this page. They are characterised by clean lines (occasionally severe in the inter-war manner), by a refusal to play aesthetic tricks with functional members like spouts, and by careful attention to details such as the shapes of knobs and handles. Several years before the war this firm was moulding plastic handles to fit the curve of the hand and serrating or hollowing the thumb rests to ensure a tighter grip. This pre-war trend has been continued in the design of saucepans and coffee percolators.

Traditionally, aluminium hollow-ware is spun from flat or roughly pressed metal. To small firms, spinning has the important advantage of low priced machinery, but labour costs are high. N. C. Joseph has been able to substitute large presses for small lathes on many processes, so quickening the rate of production and substantially reducing over-all costs. The use of presses has somewhat narrowed the scope for variation of basic shapes that can be made without expensive tooling, but this is not a severe limitation to this firm which has a large press shop and believes that no design for mass production is good unless it can be manufactured simply by the appropriate modern techniques and unless its tool cost, often high, can be justified by its potential market.

The firm has made frequent use of embossed decorations on its tea sets of traditional shape and it is pertinent to ask whether it might extend its vigour for innovation to this field also, more particularly because craftsmen who can engrave complex patterns on dies are becoming increasingly rare and their work may have to be replaced eventually by simpler and more easily executed patterns. If, as seems



▲ This detailed patterning is obtained with hand engraved steel dies. But engraving of this complexity is a highly skilled and a dying craft. Will progressive manufacturers now switch to simpler modern patterns which can be engraved with less skill?

Two post-war coffee percolators, intended for sale at home and abroad. Both are graceful, yet straightforward and easy to make, though the left hand model is less successful as a design because the small, angular plastic handle (of standard shape) is unrelated to the form of the pot. The containers are chromium plated, but some Joseph hollow-ware gets its bright finish solely by polishing.

The handle is the unsatisfactory feature common to these teapots whose shapes, if not inspired, are good enough to warrant accessories of better design.



Design: Number 90

possible, the shapes of mass produced containers become increasingly standardised as techniques of production advance, the real interest in tableware as distinct from kitchen products will shift from shapes to patterns. Freshly inspired modern decoration may well become an important factor at the point of sale.

It is refreshing to find that British made hollow-ware has a good market in North America, but those who seek to enter it must produce designs which are often distinct from those which sell well on the home market. The American and Canadian industry is dominated by large firms, each producing a few models on a vast scale and at a very low price made possible by the existence of a large home market. The choice of available models is not wide and most Americans like it so; but a minority remains unsatisfied by domestic producers and can be persuaded to buy goods from Europe that are of individual design.

N. C. Joseph entered the North American market soon after the last war and has adjusted new designs in order to give them appeal in transatlantic shops, while maintaining a flexible attitude towards this mercurial market. Success depends on keeping a close watch on North American trends. Joseph's export drive proved to be so successful that it has now set up a factory in Canada to assemble parts (and manufacture some of them), using designs conceived in Britain.



The exhibits will be shown in these stands in the Kungsträdgården, a park in the centre of Stockholm. The permanent outdoor showcases have been erected by Svenska Slöjdföreningen, and some of its exhibitions are held here.

Sweden shows British

Svenska Slöjdföreningen and the CoID have organised an exhibition of British goods to be shown in Stockholm during the state visit of the Queen and the Duke of Edinburgh this month. Åke Hult, director of Svenska Slöjdföreningen, chose the exhibits, some of which are illustrated, mostly from goods selected for the opening of The Design Centre. To mark the opening of the exhibition on June 2, Svenska Slöjdföreningen will hold its annual meeting in the presence of King Gustav of Sweden, and Sir Gordon Russell, director, CoID, will speak on the setting up of The Design Centre.

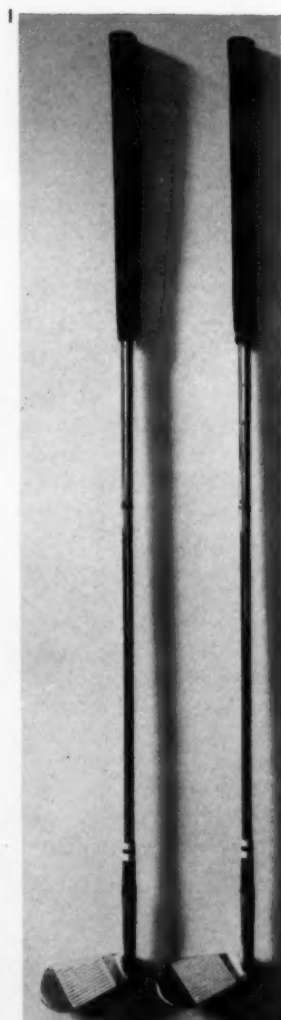
1 Golf clubs with steel shafts and heads, and leather grips. MAKER A. G. Spalding & Bros Ltd.

2 Sickles with forged carbon steel blades and plain beech handles. MAKER W. Tyzack, Sons & Turner Ltd.

3 Hand made crystal sherry decanter and glasses. MAKER James Powell and Sons (Whitefriars) Ltd.

4 'Chef' electric foodmixer, made of aluminium die casting, finished in various colours. MAKER Kenwood Electric Ltd.

5 'Gourmet' dining chair made of moulded glass fibre in a wide range of colours. DESIGNER and MAKER Aidron Duckworth for Heal & Son Ltd.

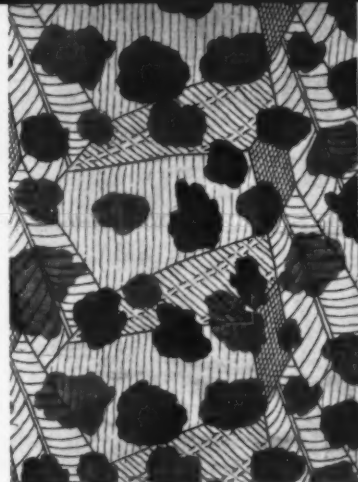
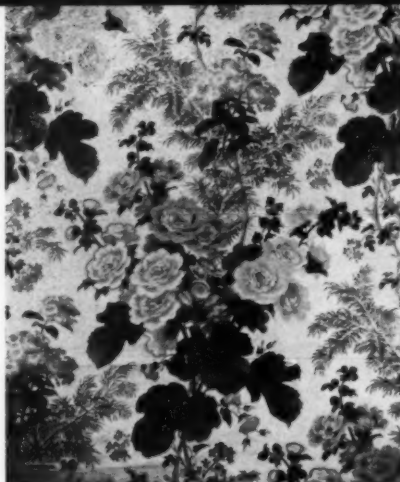


Between the extremes of naturalism and abstraction lies a traditionally English approach to printed fabric design which is a valid guide for modern work. Left, 'Hollyhock', used as an example of 'False Principles in Design: Direct Imitation of Nature' in a didactic exhibition arranged by Sir Henry Cole at the Museum of Ornamental Art, Marlborough House, 1852; see p 51. Right, 'White', 1913, designed by Vanessa Bell and printed in France for the Omega Workshops.

MICHAEL FARR

Living tension

The illustrations on pages 33-35 are taken from 'English Chintz: Two Centuries of Changing Taste'. This exhibition was organized by Peter Floud, keeper of the circulation department of the Victoria and Albert Museum, and Barbara Morris, senior research assistant in the museum; it was arranged by Donald Tomlinson, director of The Cotton Board Colour, Design and Style Centre, Manchester, and designed for showing in the centre during last December and January by Robert Nicholson with decorations by Roger Nicholson. In the exhibition the term 'chintz' was used to describe a printed furnishing fabric, usually cotton. One of its main aims was to prove that, on the basis of recently discovered records, many well known pattern styles, especially between 1760 and 1800, were of British and not Continental origin as had been previously thought. It is now possible to place the productions of individual printers almost week-by-week through some periods. The result is inspiring: proving that in design, technique and craftsmanship, Britain can claim to have played a leading rôle throughout.



IS THERE A TRADITIONAL TYPE of design for printed furnishing fabrics that is sufficiently fertile to form the basis of modern work? The question should be asked by all who design, make and use printed fabrics, for it is clear that the bulk of contemporary work is moving uncertainly in different directions.

The recent unique opportunity to look back on past productions in the exhibition of English chintz, demonstrated that, on the basis of the material found, one approach to the design of furnishing fabrics has consistently shown itself to be the source of original work. Simply stated, the approach stems from fresh observations of live, growing plants; observations that are rendered by the designer either with life-like naturalism or by firm organization of the natural forms to the point where they are subordinated to the pattern they originated; subordinated to the point of abstraction. The approach is less successful where carried to the two extremes, but most successful – and therefore perhaps most useful to the modern designer – when there is a tension set up between these extremes.

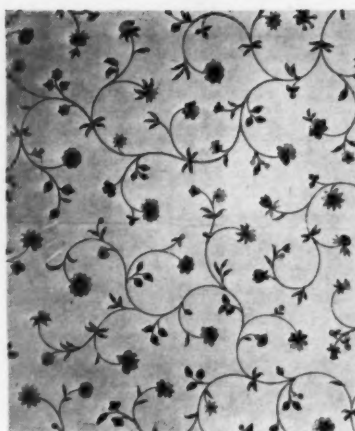
These illustrations trace, chronologically, some examples of this approach. Seen in the context of the exhibition itself, they stood out from those designs which, on the one side, amount to no more than paintings of flowers on a fabric, and on the other, to geometrical abstractions. Observed nature in the designer's work gives it a lifelike quality, a popular common denominator to be recognised by others and appreciated by them sensually. Abstraction in his design introduces that sophisticated, pure aesthetic quality that appeals to the intellect. The individual merits in each design are no nearer definition than this; they vary according to the designer's ability to transmute both opposing qualities into a synthesis of pattern and colour.

This synthesis cannot be measured by a universally agreed scale of values, for beauty, in a very real sense, lies in the eyes of the beholder. The designer can do no more than finish his work; the critic can simply describe it with a point of view that invites acceptance. So it still remains for the reader to decide which designs shown here and on the following pages are good, bad or indifferent and, more importantly, whether or not a characteristic link can be seen between work produced today and 30, 50 and 150 years ago.

Living tension

That the best furnishing fabric designs depend on a synthesis of two opposites, can be seen in these examples from the recent 'English Chintz' exhibition. In the earlier sections some meticulous plant drawing, organized without subtlety into repeating motifs, was boring and banal as fabric design. In the last section, dealing with work up to 1951, the pure abstractions were lifeless and esoteric. Between these periods an approach to design was formulated that turns out to be a valid guide for modern work.

1 This early English print shows a tendency to arrange a slight floral motif as an abstract pattern which could maintain a continuity of interest when draped in folds. Probably the strongest and earliest influence on abstract design during the last 200 years came from the Orient. The flowers in 2 have been conventionalized and largely subordinated to the complicated curvilinear pattern. In 3 the naturally rendered foliage is dominant, but a sense of abstract values comes from the repetitive dark tones. Of the same date is 4, but here the motifs have been strictly rationalised so that the 'floral appeal' seems to depend more on the overall massing of colour than on the flowers themselves. 5 and 6 show that clarity can be maintained for both conceptions, natural and abstract. Fine, firm motifs have not weakened the control of pattern. Much more pervasive sophistication was introduced by the early members of the Arts and Crafts Movement. 7, shows a design rigidly controlled by an abstract idea, that is yet clearly derived from observation of natural growth. Akin to this was the early work of Morris which, judged on the basis of balanced opposites, was less attractive than the subtle blend of art and nature in 8, a late design. This tension is well shown in 9, which closely follows the Continental version of *Art Nouveau*. In 10, the design is more relaxed and the trees gain ascendancy over their abstract grouping, so weakening the impact. Under the pressure of Continental experiments in painting, a handful of English artists explored the ways of total abstraction. Here, 11 and 12, the English continuity breaks, and a furious attempt is made to establish the abstract in its own right. Nothing is derived from the forms, colourings or movements of natural growth; the designer relies on intellectual exercises. Duncan Grant's, inter-war design, 13, recreates the tension between opposites. The apparently simple grouping of natural forms in 5, is recalled in 14, where sophistication is kept in check by a delight in accurate plant drawing. 'English Chintz', in the commonly accepted sense, suggests roses or rich floral sprays, often little more than a seedsman's coloured drawing repeated up and down the fabric. But for the lively engagement of both our natural and sophisticated interests the designer's powers of organization are needed. 15 is a perfect example of that balanced tension which, it is suggested, forms the mainspring of the English tradition. How this affects us today is briefly examined in the following pages.



1 1760-1800 London pattern book.



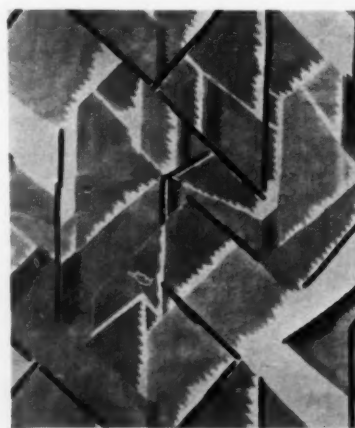
2 c1805 Indian 'Arborescent' chintz, black printed probably for Richard Ovey



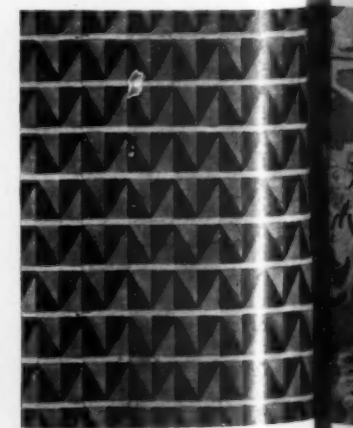
3 1863 Roller and block print for Jonathan and Albert John Crocker.



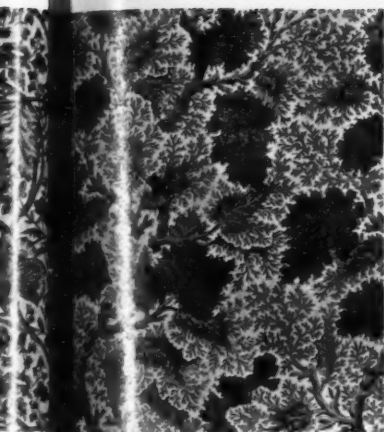
4 1883 Block print by A. H. Macmurdo Simpson and Godlee for the Century Guild



5 1913 'Pamela' block print by Roger Fry for the Omega Workshops.



6 1920 Roller print by Claude Lorrain-Fraser for William Foxton.



1805 Block print at Banister Hall for Richard Owen.



4 c1805 Block print.



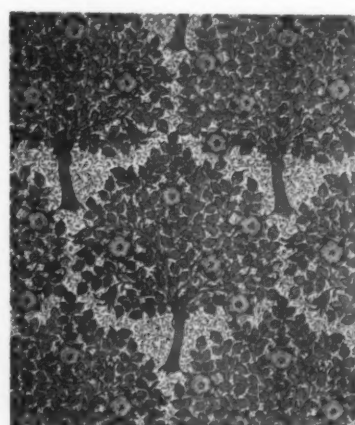
5 1858 Block print by J. and H. McAlpin, Stead & Co.



1891 'Daffodil' block print by William Morris at Merton Abbey.



9 c1905 'Waterlilies' block print by Harry Napper for G. P. and J. Baker Ltd.



10 1912 'The Rose Tree' block print by Ronald Simpson for Alexander Morton & Co.



1932 'Flying Figures' screen print by Norman Grant for Allan Walton Textiles.



14 1935 'Cornucopia' block print by Enid Marx.



15 1939 'Hand and Poppies' screen print by Marion Dorn.



Design in cotton

1 'Bettina' designed by Willi Herrman for Story (Fabrics) Ltd.

2 'Mare's Tail' designed by Edward Pond for Heal's Wholesale & Export Ltd.

3 'SP156' designed by Louis Le Brocquy for David Whitehead Ltd.

4 'Architecture' designed by Françoise Lelong for Primavera (London) Ltd.

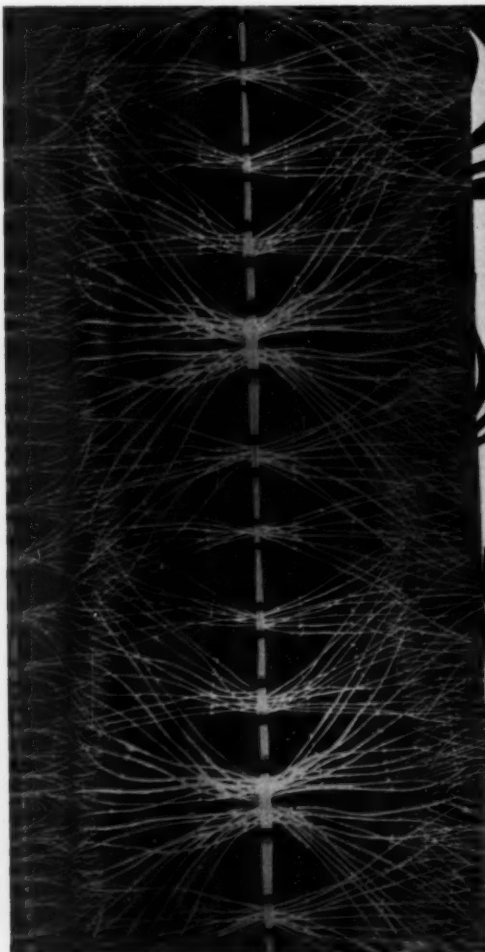
5 'Palings' designed by Sheila Pickersgill for Heal's Wholesale & Export Ltd.

The five designs here, selected by Donald Tomlinson, director of The Cotton Board Colour, Design and Style Centre, are among those printed and woven fabrics he has assembled for the special exhibition at The Design Centre, London, June 4–July 7. These patterns – and the exhibition itself – serve to test the theory of design for English printed fabrics advanced on the preceding pages.

1



2

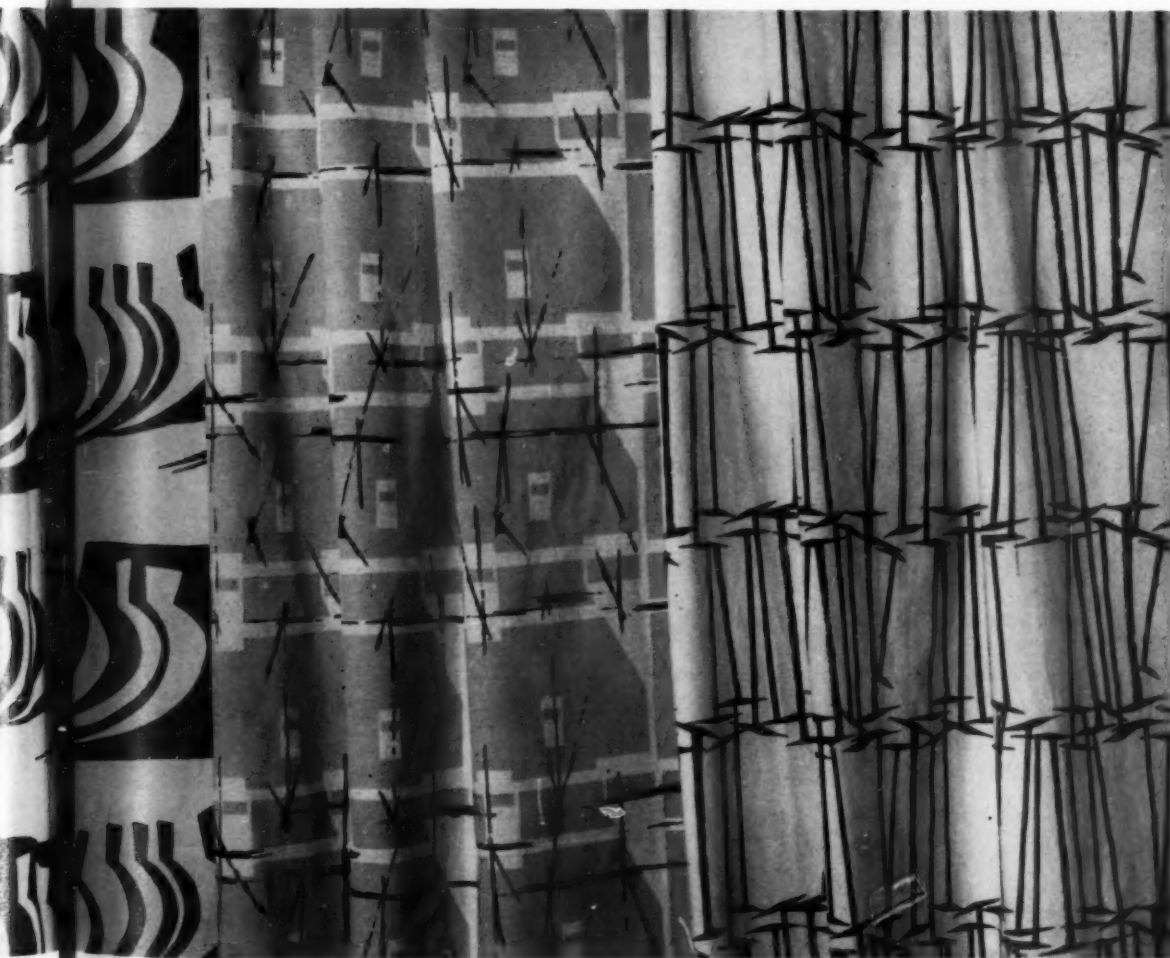


3



1 is a design that belongs to the naturalistic school to one side of what, I suggest, is the live English tradition. But a qualification must be made: the flower drawing is conventional and has little of the impact to be derived from nature freshly seen. In the main stream of the tradition is 'Mare's Tail', 2, where the designer has organized natural growth to the point of abstraction. A homogeneous fabric pattern results with the original source of inspiration plainly identifiable. The balance struck can also be seen in 3, where the realism of the sickles is poised against their abstract arrangement. The designer developed his pattern from a photograph of sickles hanging in a Spanish doorway (DESIGN February p 27); other painters, Walter Sickert, Paul Nash and Francis Bacon, have similarly used photographs as a

starting point for their canvases. As naturalism recedes, so the average observer loses a useful point of contact; his appreciation must be derived progressively from the intellect. Moving towards abstract values and therefore away from the traditional stream is 4, 'Architecture'. Yet in this there is nothing of the cold, geometric abstractionism that hallmarked advanced work in the 'twenties, like the 'Pamela' block print by Roger Fry on page 34. The designer's care for textural values in the black, broken lines, gives the pattern a human 'feel'. The invigorating tension caused by the balance of opposites, natural/abstract, becomes weak in 5. But its aesthetic value does not spring from geometry, or even from the harsh, but long fashionable 'mobile' phase, now dying out. M.F.



Overseas Review

Denmark

Selling to America

Just Lunning, director of Georg Jensen Inc, New York, has written on the background to Denmark's successful export drive to the USA, in an article which appeared in two Danish periodicals, the official 'Undenrigsministeriets Tidsskrift' and in the design magazine, 'Dansk Kunsthåndværk'. The article, which is summarised below, tells a remarkable story of achievement, which has many pointers for the British manufacturer.

The illustrations show examples of Danish products which have had extensive sales in the USA.

During the last ten years in the USA, "the feeling for quality and style (in domestic consumer goods) has steadily grown. The extent to which it has happened" reports Just Lunning, "exceeds the wildest dreams that an optimist could have had at the end of the 'thirties". The reasons Mr Lunning gives, among others, are the increase in the American national income, the greater interest in the home, and the influence of European refugees, par-

ticularly of designers, architects, teachers and manufacturers. The American way of life, he suggests, has moved nearer to that of the Danes, with their small houses and flats, and goods designed for Denmark are now appropriate in the States.

America herself has met part of this expanding market for quality, but imports, too, have risen, and Denmark has had her proportionate share. Mr Lunning is perhaps too modest in this statement, judging by the table below, which shows a staggering increase in export items between 1950 and 1954, particularly in furniture.

Exports from Denmark to the USA (million Danish crowns)

	1950	1954	percentage increase
Glass	0.1	0.8	700
Pottery	0.2	2.0	900
Porcelain	2.0	3.4	70
Silver	3.7	4.0	8
Other metals	0.2	1.8	800
Furniture	0.2	4.8	2,300

During the first half of 1955, exports of furniture had already totalled four million crowns.

The basis of Danish success is quality. "That means", says Mr Lunning, "quality in craftsmanship and execution - whether the goods come from factory or workshop - and it means quality in the form of advanced design, with an open eye for world changes, based on, but not bound by, Danish

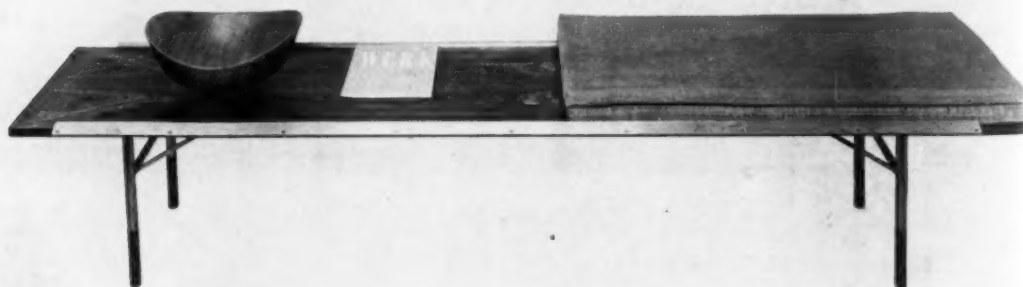
traditions. . . . With increased world competition for the American market one must keep one's eyes open. This is no time to rest on past laurels. The USA can no longer be regarded as a primitive pioneer society which gratefully accepts every offer of 'old European culture'."

Danish firms are too small to compete in price through mass production. Therefore quality is the factor on which they compete, together with originality, with price a secondary consideration - but only if quality is better than that of rival products.

Mr Lunning has something to say about selling methods. He quotes an axiom: "American consumers do not buy, one sells to them". Therefore, American agents, wholesalers and retailers need higher profit margins than are usual in Europe, and it takes longer to reach "the product's highest sales potential". He says that many Danish attempts to build up sales in America have failed because of a suspicion that the American importer wanted excessively large margins and did not sell enough. The exporter must be prepared to wait perhaps three years for a full impact on the market, and if he cannot put up the initial capital needed he must let the American importer reap the profit he demands.

Against this Johannes Hansen, the furniture manufacturer (Paul Høyrup is his designer) has in four years succeeded in distributing his products concentratedly in New York state and California,

Teak bench with brass side rails. DESIGNER Finn Juhl. MAKER Bovirke.



with a sprinkling of customers in other parts.

What applies to the Danish manufacturer applies equally to his British counterpart, for both countries have a background of craftsmanship, good quality and special national characteristics.

The statistics quoted by Mr Lunning suggest that our own manufacturers might well find a growing opportunity to increase their exports to the dollar areas by matching traditional British quality by more adventurous designs. We therefore asked four firms representing various aspects of British industry to comment on the Danish achievements.

Pottery

Lucien Myers, managing director, Carter, Stobler & Adams Ltd:

It has been suggested that the spectacular increases in Denmark's exports of pottery to the USA between 1950 and 1954 make a challenging comparison with Britain's earthenware exports for the same years. Our figures are, 1950 - £1,222,871 and 1954 - £1,151,384, showing a slight decrease.

But, it is always dangerous to point to a substantial percentage increase where the initial figure is a very small one. By 1950 Denmark had not recovered sufficiently from the occupation period to develop her exports to the USA to anything like a normal standard. In 1954 Britain's earthenware exports were over ten times the volume of Denmark's pottery exports to the USA and we were obviously around saturation point for this market, whereas subsequent figures will no doubt prove that there is still room for further expansion in Denmark's volume.

I do not think it safe to assume that if a higher proportion of the British earthenware industry were to produce ware for the American market comparable to Danish designs, we could expect an increase of anything like 900 per cent in our exports over a period of a few years. If more of our earthenware manufacturers produced ware of original modern design they could perhaps sell it to America instead of much traditional ware and this might effect volume sufficiently to check any decrease in sales which may well be accounted for by staleness of design.

A few British potters are in fact making ware of modern design for the USA and I know that some of these



'Kremis' 'cook and serve' bowls. Black matt finish enamel on pressed iron, lined with

polished enamel in various colours. MAKER Torben Ørskov.

designs are meeting with very great success. I feel sure that when these successes become more widely known in the industry, other British firms will take the hint. But all this must ultimately depend on the availability of really creative designers. Are these available?

Glassware

John Webb, director, Webb Corbett Ltd:

For a great many British exporters and prospective exporters, the American market is a major problem, first, because it is a market which has its own very individual ideas and requirements, second, because it has its own vast industrial potential to supply those needs, and third, because it sets up tariff barriers in the face of the importer.

To take the example of our own industry, there is in the USA a large number of firms manufacturing domestic glassware and crystal, and these obviously absorb the bulk of the American market, leaving the importer to mop up what is left over - usually the more specialized type of product not readily available from American sources.

It may be that in general, the style of goods manufactured and sold in Denmark also fits into the narrow gap between American production and consumption, thus explaining the recent

success of Danish exports to the USA. British manufacturers, on the other hand, have to style their goods for the home market and main overseas markets, such as Canada, Australia, New Zealand and South Africa.

It must not be overlooked that Mr Lunning's figures, showing percentage increases between 1950 and 1954, are based on insignificant 1950 Danish export volumes, in all cases except those of porcelain and silver, and in these the increase has been comparatively small.

As to Mr Lunning's statement that the basis of the Danish success is their concentration on quality in the form of advanced design, our own experience is that the American buyer is interested just as often in articles of traditional style as he is in advanced types.

Silver, plate and cutlery

Peter Inchbald, director, Walker & Hall Ltd:

The British silver, plate and cutlery industry, like the Danish, is organized to a large extent in small firms, many employing under 25 workpeople. There are a number of medium sized concerns, a few substantial, none really big. There is still much handwork and the skilled men are ageing and becoming fewer; managements and men are working flat out to supply existing markets

Denmark

and have little incentive to search for fresh ones.

The American industry is highly mechanized and protected by tariffs normally of 25 per cent; it usually produces an insipid looking object of doubtful quality and presumably vast sales appeal. With this we can hardly expect or wish to compete. We have to sell, like the Danes, on quality and design; in both of these we are inferior to them but superior to the Americans, who still regard ours as fine quality goods.

I believe that mechanization can give us badly needed precision of finish and shapes, and free the craftsmen for really fine handwork, thus giving us the quality and quantity of goods we need. The problem then becomes one of marketing. Mr Lunning's remarks on this are to the point; it is risky and expensive, but it can bring great rewards.

It is worth noting that our exports (excluding personal export) to the USA of silversmiths' goods compared with the Danes' were (to the nearest £1000):

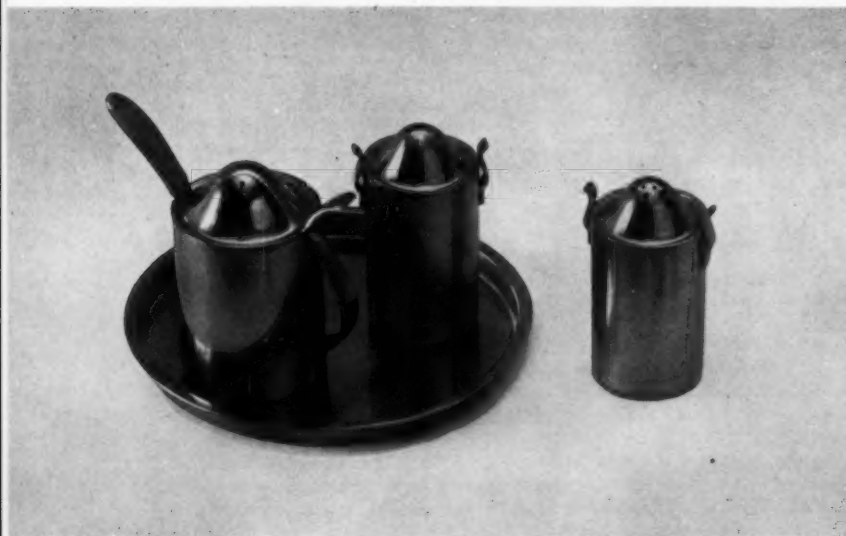
	1950	1954
Great Britain	£474,000	£531,000
Denmark	£202,000	£300,000

During this period our exports to the USA of sterling silver articles dropped from £86,000 to £42,000



ABOVE Sterling silver salt and pepper set. DESIGNER Hans H. Henriksen. MAKER Georg Jensen Silversmiths Ltd.

BELOW Stainless steel condiment set. DESIGNER Harold Nielsen. MAKER Georg Jensen Silversmiths Ltd.



Furniture

Leslie Julius, managing director, S. Hille & Co Ltd:

Denmark, being a small country where craftsmanship still flourishes, happens at this moment to be in a position to supply a growing demand for high quality and fine design. The United Kingdom, on the other hand, is highly industrialised, and is suffering shortages of skilled craftsmen in the same way as its main competitors, the USA and Germany.

It is perhaps unfortunate that the British public, and in particular British retail buyers, base their concept of good design on the Danish and Swedish idiom. In my opinion the Scandinavian style springs from an agricultural background. The industrial background of British design should inspire different forms in the finished product.

There has always been a market in the USA for British high quality reproduction furniture, but with the change of taste in the American consumer



ABOVE Teak dining table with hand rubbed oil finish. DESIGNER H. Kofod-Larsen. MAKER Christensen & Larsen.



ABOVE Nest of tables in teak with hand rubbed oil finish. DESIGNER Eske Kristensen. MAKER L. Pontoppidan.

market, the amount required in the USA has fallen very considerably. British furniture of advanced design is relatively rare, but those firms which do produce high quality well designed pieces can always sell them in the United States. They have to face the American importers' desire for a high mark-up on the furniture, while many American importers appear to be oppressive in their demand for the manufacturers to work to small margins of profit.

There is no doubt, however, that a large and growing market could be found for modern British furniture, if the manufacturers themselves were prepared to make on-the-spot investigations of the market, invest in opening showrooms, and speculate on a run of three or four years without a profit.

Finally it should be remembered that the Danish exporter receives financial encouragement from the Danish Government, because the American dollars earned can be sold on the free market. Additional profit is made by the manufacturer who operates the exchange rates to suit himself.

British manufacturers of modern furniture can stand on their own feet in this respect, but they must be prepared to be more aggressive in their efforts to sell overseas, whenever they take up the challenge.

BELOW Side chair in beechwood and rosewood. DESIGNER Finn Juhl. MAKER Bovirke.



USA

Unit furniture in steel

Unit steel furniture manufactured with a minimum of basic components, but offering wide variations, is being marketed in the USA for use in hotels, motels and institutions, including schools and hospitals. The range called 'Theme' was designed by Raymond Spilman of New York for the Simmons Co, which had previously produced steel furniture with design clichés of the 'twenties and 'thirties. Some of these designs also imitated wood, to such an extent that the catalogue included a metal 'Windsor' chair.

The new range is of interest for two reasons: for the treatment of metal as a material for furniture, and for the economy of the basic components. Steel is brought out of the kitchen and office class, so that its durability and hygienic qualities can serve hotels, cafés as well as institutions, but the institutional appearance is eliminated, together with as many as possible of the disadvantages of steel for furniture. The tops of tables and cabinets are treated with patterned 'Textolite', a laminated plastic bonded to the steel, and the fronts of the storage units are sometimes painted in the same design. Provision is made to absorb the noise of opening and closing doors, drawers run on nylon guides and legs end in rubber cushioned glides with ball type stems.

The range of storage units has been worked out to give a maximum variety of storage arrangements with only three basic cases. Table tops can be used in conjunction with these units to make

desks and dressing tables, and when single pedestal pieces are wanted, single legs to support the free end of the table top are available.

The basic steel frame of the dining chair can be fitted with a steel seat, an upholstered seat, or have both the seat and back upholstered. There is also a tub chair, where the seat is upholstered and the back also if necessary, and an easy chair with the possibility of variation in the amount of upholstery. This easy chair can have one or two arms or be armless, so that seating may be built up as required.

Colours have received the same careful attention from the designer. Walnut brown and sycamore grey are the basic colours, with ebony, coral, sea green and jonquil to provide occasional accents. This extremely useful and practical range of furniture is backed up by an excellent catalogue which illustrates all the possible variations and clearly sets out other information required.





▲ The tub chairs are available with or without upholstered backs and the easy chair can be obtained with or without arms. The coffee table has one of several tops available in various sizes and shows one of the 'Textolite' patterns. There are two heights of leg for use with these tops.



Two versions of a storage unit using the same basic carcass.



◀ A room setting showing the variety of pieces available in the 'Theme' range of unit furniture for hotels and institutions of various types.



Both the seat and back can be upholstered for these dining chairs which are also available with steel seats. ▶

Malaya

Showroom for an importer

China Engineers Ltd, a firm in the Far East which imports a wide variety of goods, mostly from Great Britain, has recently opened new offices and showrooms in Kuala Lumpur, Malaya. This is the first modern building in Ampang Road, the local 'golden mile', and it sets a high standard for future projects of this nature.

The goods imported by the firm include many articles that are too large or too expensive to show in the round. The main display stands, consisting of a locally made open framework of welded mild steel, have therefore been designed to accommodate models, photographs and special displays, as well as actual products. A two-ft module has been used and this has been carried through in the ceiling grid at the rear of the shop for the display of lighting fittings.

Basic colours throughout the showroom are dark blue, primrose and plum red, and the rear wall is covered with yellow Spanish tiles. The floor is mosaic tiled in light brown with dark brown strips in graduated panels.

The local architect was Y. T. Lee and the showroom was designed by a member of the staff of China Engineers Ltd, Peter E. M. Sharp, Far East correspondent for DESIGN and previously an industrial officer with the CoID.



The front of the building is faced with buff glazed tiles and the projecting bevelled frames are tiled in dark green mosaic with white pointing. The showroom windows are set back five ft, as otherwise the intense sunlight would prevent the interior of the showroom from being seen from the street.



A general view of the interior showing the open metal display frames, and a display bathroom tiled in blue and oyster grey.



The showroom as seen from the entrance lobby. The teak display stand in the foreground was made locally to the designer's drawings.

NEWS

DESIGN CENTRE

Conference for carpet designers

The Federation of British Carpet Manufacturers is holding a conference for carpet designers in The Design Centre from June 4-8. This is the first conference to be held in The Design Centre and the first of its kind in the carpet industry. The programme, which was arranged by the CoID, includes lectures, discussions and visits to places of architectural interest. Among the lecturers are Paul Gell, Robert Furneaux Jordan, Mrs Moira Hallifax, J. H. Mellor and Professor Wyndham Goodden.

DIA discussion

The Lord Conesford will open a discussion on The Design Centre at the DIA lunch meeting, June 7, 12.30 - 2.30 pm. The meeting, at the Over-seas League, Overseas House, St James's, SW1, will be conducted by Sir Stephen Tallents, president, DIA.

Special exhibitions

The CoID is to hold several specialised exhibitions in The Design Centre this year. The first of these, 'Design in Cotton', is discussed on page 36 of this issue. From July 9 - September 8 there will be an exhibition of tableware called 'Britain at Table'. This will be followed by an exhibition illustrating the work of the CoID's Record of Designers, from September 10 - October 6, and there will be a carpet exhibition from October 8 - November 17. Details will be announced later in DESIGN.

EXHIBITIONS

SIA exhibition in Hungary

The SIA is to hold an exhibition of British graphic design in Budapest in June. The society has been invited by the graphic design and commercial art section of the Hungarian Institute of Fine Arts, and the exhibition will be the first of its kind to be shown in an 'iron curtain' country. The exhibits will be the work of members of the SIA and David Caplan who is organising the exhibition will go to Budapest for the opening.

Dutch design and printing

In a modest exhibition at the National Book League in London, the Netherlands Graphic Export Centre set out to show the cream of design, printing and publishing in that country. Unfortunately, the dispute in the British printing trade was too recent for some tactful Dutch printers, who withdrew their exhibits as a mark of goodwill,

leaving gaps in an otherwise representative showing of a very wide variety of work from cigar labels to masterly manuals of scientific study in the English language. Most original in conception were the calendars, beautifully printed in a variety of formats and styles of illustration.

The Dutch have a fine reputation for printing over many centuries. Their photo-gravure work has always set the highest standard and some of the commercial examples vie with the fine art productions by its sister process colotype. The Dutch typefounders have been very active since the war and some fine faces have been designed, a number of which are available through the international matrices of 'Monotype' and 'Intertype'.

It is clear that the Dutch printing and publishing trade has benefited by the Government aided Institute of Printing Technique and the Netherlands Graphic Export Centre, examples of collective action to help the development of an industry. P.H.

'Expamet' exhibition

The Expanded Metal Co Ltd recently held an exhibition at The Tea Centre to show the range of expanded metal made today. The company produces this metal in approximately 350 forms and sizes, and about a third of its output is exported.

The exhibition consisted of a series of display stands showing various types of metal and the different finishes which can be applied. There were also exhibits of some of the products made from expanded

Self service in Slough

Competition from large stores and combines has forced the small shop keeper to take a fresh look at his methods of selling and display. This men's outfitting shop in Slough is one interesting example of how the problem can be tackled. The shop has been entirely reorganised on a self service basis, so that the customer can walk in and look round without feeling obliged to buy. The goods are easily accessible



Scholastic ashtray

This wall ashtray was designed for use in St Paul's College, Cheltenham, by Daniel R. Shannon, lecturer in art and craft. It has a cast aluminium alloy case, finished in stove enamel, with a welded steel reversible liner. It was made by G. C. Harris Ltd.

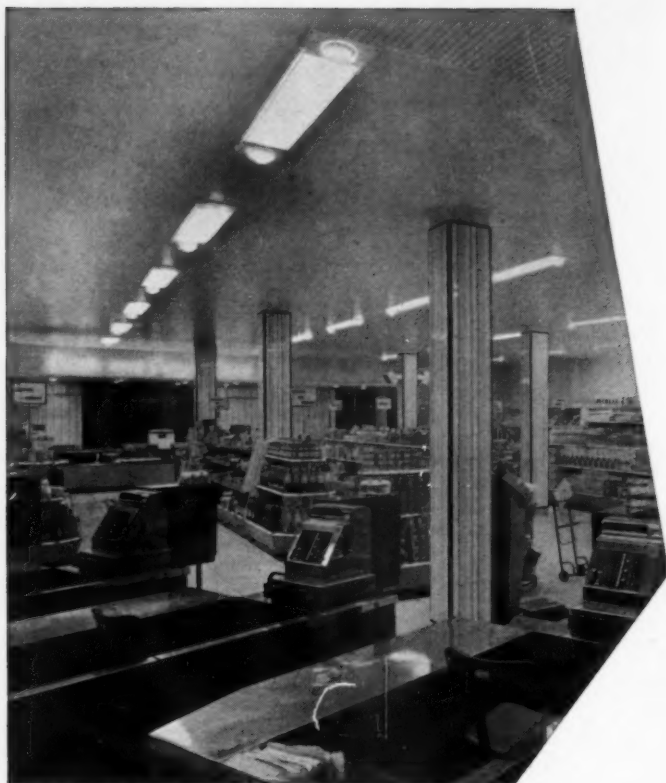
metal. These ranged from the shields used by troops in Cyprus to the giant aluminium 'snowflakes' which floated over Regent Street last Christmas. The exhibition was designed by R. H. Treleaver.

Students' designs

An exhibition of furniture and furnishings designed and made by students at the LCC Technical College for the Furnishing Trades will be held on July 2-6. Sir Hugh Casson is to open the exhibition.

continued on page 47





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continued from page 45

Dutch design at Sheffield

Through the initiative of Sheffield University a special event known as 'Holland in Sheffield Week' was held recently in that city. Items of interest included fashion shows and demonstrations of clog making. Dutch food was served in local restaurants. There was also a small exhibition in Sheffield museum of industrial design chosen by the Institute for Industrial Design, Amsterdam, to represent most of the consumer goods manufactured in Holland. There were chairs with pointed legs, fabrics with lines and dots, and anaemic looking light fittings in wire-shapes and patterns which have become all too familiar in recent years. Apart from some really fine glass by Leerdam which was of an unusually high standard and had a character of its own, the chairs might have been by Race and the stainless steel cutlery by Gense. The simplicity and inventiveness of Dutch engineering ability was only rarely to be seen there and seems to have been lost to the vogue of international fashions.

DAVID R. MELLOR

Cambridge Design Society

The Cambridge Design Society, recently formed by undergraduates, is to hold its first exhibition this month. The theme is 'Street Furniture in Cambridge', and the exhibition will be held from June 11-16 in the foyer of the Victoria Cinema, Market Square, Cambridge. Michael Dower, the chairman of the society writes: "The exhibition will include models, full scale exhibits and photographs of different types of street furniture in Cambridge, showing them in their present context, out of their context, and as they might be".

British Colour Council exhibition

The British Colour Council exhibition 'A Story in Colour', which was to open on May 8 has now been postponed until September 24, when a conference on colour will also take place at its London headquarters.

MISCELLANEOUS

New company

The AEI Lamp and Lighting Co Ltd, a new company of the AEI group, has recently come into operation. It will market the lamp and lighting products of British Thomson-Houston Co Ltd, Edison Swan Electric Co Ltd and Metropolitan-Vickers Electrical Co Ltd. Jack Howe has been appointed design consultant to the new company for all types of lighting fittings.

'Fidor' information sheet

The latest leaflet in the 'Fidor Information for the Handyman' series issued by the Fibre Building Board Development Organisation, is a reference sheet which describes the range of fibreboard now available. There is a chart showing which type to use for various different purposes, and a section on rules for fixing the fibreboard.

continued on page 49



Design office for plastics

This illustration shows the interior of a new design office which has been recently opened by the Plastics Division of E. K. Cole Ltd. The

purpose of the office is to carry out designs for articles in plastics as well as to advise and assist trade customers in their design problems. M. O. Rowlands is in charge.

Leeds University

Leeds University has a new staff house, which is part of a big development plan. Dunn's of Bromley, under the supervision of its designer Robert Mabon, furnished and decorated the dining rooms, three common rooms, the bar, the staff dining room and much of the library. The room shown here is one for entertaining up to

20 special visitors. The table top is veneered in weathered sycamore with an inlaid rosewood line. The legs and underframe are in mahogany, polished rosewood colour, to match the chairs which are upholstered in blue hide. The hand printed paper was designed by John Aldridge. The other walls and woodwork are painted grey, with the ceiling in grey-green. The curtains are by Edinburgh Weavers.



City of Leicester Education Committee



LEICESTER



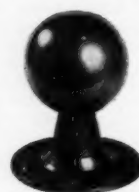
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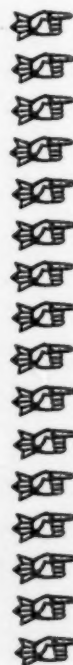
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continued from page 47

Design lecturer appointed

L. Bruce Archer has been appointed full time lecturer in industrial design at the LCC Central School of Arts and Crafts. He will be in charge of the engineering workshop and foundry, as well as the design drawing office. The head of the department is the school's vice principal, A.E. Halliwell.

N. C. Robertson

N. C. Robertson, deputy managing director of E. K. Cole Ltd and a director of Ecko Electronics Ltd died recently at his home in Burham-on-Crouch. He had been associated with E. K. Cole since 1930, and was appointed deputy general manager in 1945. Mr Robertson was a fellow of the Royal Society of Arts and a freeman of the City of London.

New developments with nylon

There has been no great encouragement for designers to use nylon for other than more or less strictly engineering applications, where its excellent mechanical properties, resistance to wear, petrol and oils, or its anti-corrosive properties fully justify its use. It is an expensive material and, owing to its extreme fluidity in the molten state, moulding tools must be machined and finished to the very highest standards.

There are however occasions where one would wish to take advantage of nylon's incredible toughness - or another of its qualities - in ordinary consumer goods, and where perhaps the cost of a nylon moulded part might not be entirely justifiable. In this connection, recent developments in hot pressing and blanking with relatively inexpensive tools from extruded strip may be of interest.

Pioneers in this are John Tullis & Son Ltd, of Glasgow, producers of 'Tullon' extruded nylon. This material is available in dimensionally accurate thicknesses up to

Perforated PVC sheet

British Geon Ltd is marketing rigid PVC sheet, perforated in a variety of patterns, and known as 'Cobex'. It is suggested that 'Cobex' can be used for grilles, screens and decorative panels, and British Geon claims that it has many advantages over metal. It is considerably lighter than mild steel and is available in a range of colours in a gloss finish on one or both sides.

Changes of address

The London address of Edward Mortimer Ltd, designers and printers, is now 12 Thayer Street, London W1, tel WELbeck 3212.

Jock Kinneir, the consultant designer, has left 37 Park Street, and is now at 3 Old Barrack Yard, Knightsbridge, London SW1.

$\frac{3}{8}$ inches and up to 8 inches in width; $\frac{3}{8}$ -inch thick material is also available but is subject to a manufacturing tolerance of plus or minus 20 thousandths. It is normally supplied in the characteristic translucent, candle-wax colour, but for substantial quantities any colour can be supplied. It is of course a relatively simple matter to dye nylon and the Dyestuffs Division of ICI Ltd is available to advise upon the selection of dyes and techniques for using them.

The normal procedure for designing for drawn or vacuum formed thermoplastic parts would appear to hold good; all radii on corners should be as generous as possible, particularly at the bottom of draws, changes of section should be achieved by curves rather than by abrupt steps; allowance must be made for reduction in wall thickness due to depth of draw.

'Tullon' is also available in the form of rod and tube, and in conjunction with simple machining, heat forming or upsetting, these too might provide an answer to a design problem.

F. C. ASHFORD

Letters

'Good Form'

SIR: May I express my appreciation of 'Good Form', the first of your series of design appraisals (DESIGN April pages 15-23).

These articles will surely be particularly valuable to those who are directly connected with design appreciation, and who, not being practitioners themselves, must sometimes feel slightly bewildered at the prospect of analysing in detail the qualities of a particular product.

Mr Beresford-Evans dissects the body with admirable clarity. He appears, however, to be undecided whether to accept the visible fixing screws on the Aga Cooker. This is a difficulty which continually faces the designer of domestic appliances where the functional and aesthetic aspects are equally important. If I may venture to comment, I suggest that few designers would expose screws in this manner if a satisfactory and economical alternative were possible. Occasionally it is impossible to avoid this exposure without increasing cost and complications.

It is unfortunate that in this particular case the designer or manufacturer did not comment on the appraisal. The comments of the manufacturer would appear to be vital in this series in order to give a balanced picture.

D. MIDDLETON
Development Manager
John Harper & Co Ltd
Albion Works
Willenhall
Staffs.

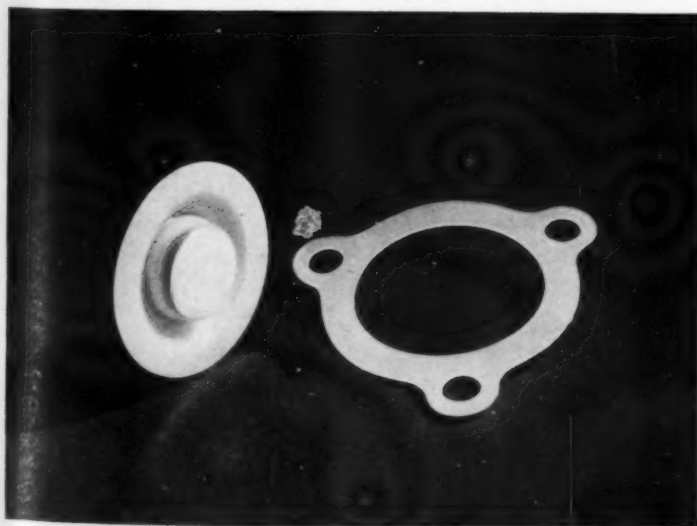
'Leave engineers alone'

SIR: Mrs Harrison's letter under the above heading (DESIGN March page 57) only covers one aspect of the subject - the outsider's. It is usual for the layman to romanticise the glittering beauty of some giant machine, the sleek lines of some streamlined mechanism or the majestic might of some towering engineering structure. Most of these, however, are made for engineers to use and their viewpoint should be appreciated.

It is when the engineer is conscious that the things he makes have to be seen by the general public that bad design often creeps in. The absurd camouflage on the Tower Bridge, even the 'false' towers on the Sydney Harbour bridge, the speed whiskers on many overseas locomotives, the selfconscious copying of contemporary trends, such as quartic shapes, merely to be fashionable - these are typical products of the engineer who has no aesthetic training. Lord Chandos, in advocating such training for engineers, has never implied that designers should apply aesthetics as some folk would apply styling, ie as an external decoration. All his remarks, in their original

continued on page 51

Two samples of simple pressed and stamped parts made of 'Tullon' by John Tullis & Son Ltd.



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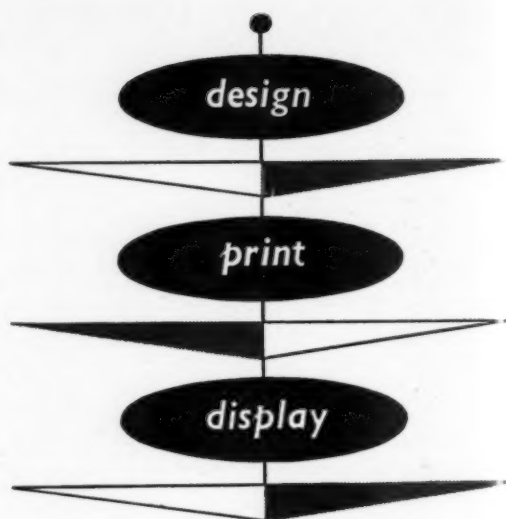
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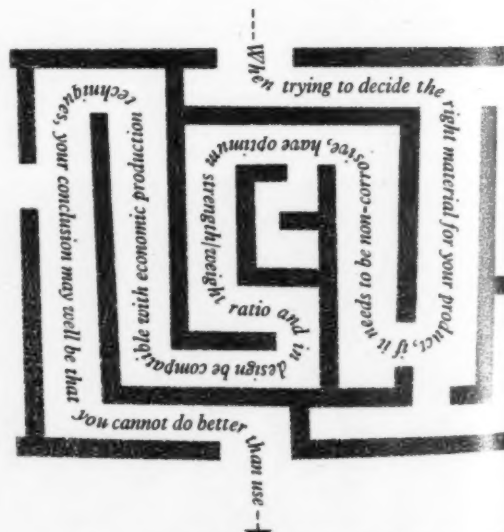
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GLASS POLYESTER

* At the design stage consult

FIBROMOLD LIMITED

HANWORTH LANE CHERTSEY SURREY CHERTSEY 647

continued from page 49

form, have indicated that an engineer should have at least a grounding in the elements of form, proportions, balance etc, so that such factors may be considered, along with technical considerations, when designing new products.

John Gloag in his book 'Industrial Art Explained' (Chapter IV) says that "Nothing is quite so painful as an engineer trying to be artistic" (my italics). One can hardly blame the engineer for trying; he knows that his designs will be criticised from all angles, particularly in the export market. He is not in a position to obtain, nor should he have to rely on, expert outside advice on every little job that arises, hence the wisdom in helping him to help himself. The wisdom, however, in having his more important designs vetted by a qualified industrial design consultant, at the present stage of his aesthetic training, should not be doubted.

The inclusion of some such training in technological classes for designers is now being discussed, and the increased facilities offered by art colleges to assist industry in this way, are both welcome.

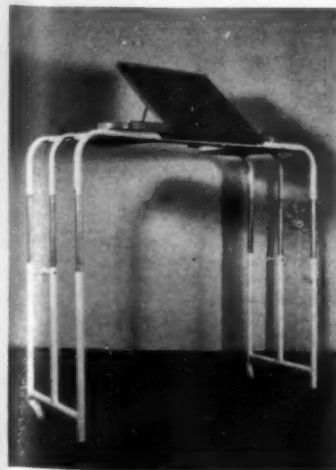
R. M. KAY

Appearance Design Engineer
Metropolitan-Vickers Electrical
Co Ltd
Trafford Park
Manchester 17

'Equipping hospitals'

SIR: In a recent issue (DESIGN February page 35) you illustrated an overbed table with the comment "This is a standard item which has been modified to be adjustable over a range of heights to suit the two level bed". (See illustration below.)

I designed this overbed table in 1938, together with many other items for the new Westminster hospital. It was produced to meet the variations of height between the hair mattresses and the thicker interior sprung mattresses which were replacing them as finance became available, and also to drop down so that convalescent patients could use them over chairs. A loose mirror was provided to fit on the adjustable desk



Design: Number 90

for dressing table use.

The model you illustrated has been subsequently brought up to date and improved by Decorative Art Guild Ltd, the manufacturer of the original tables, and is still a standard production of the firm. A considerable number of them are in use in hospitals all over the country. A great deal of research work was put in by those responsible for fitting out the Westminster hospital, based apparently on the same approach as the Nuffield Provincial Hospitals Trust - that of close co-operation with the designer, house governor, surgeon or physician in charge of the department under consideration, the matron and the sister most concerned.

An approach independent of available and standard furniture and fittings was made in preparing the requirements of each department. Where a standard article completely filled the purpose it was adopted or modified as required. Where none was available or the cost of modification unduly high, a new design was made.

F. R. WRAY

Director
Decorative Art Guild Ltd
43 Lower Belgrave Street
Belgrave Square
London SW1

The cost of good design

SIR: One may perhaps define the basic requirements for the design of consumer goods as an attempt to combine function, appearance and quality of the highest standards with the lowest possible cost to the customer. Unless these conditions are fulfilled the design work involved has been to no purpose.

This fact does not appear to be sufficiently obvious to warrant the attention of the majority of designers and manufacturers. It is becoming increasingly apparent that articles which have the tag 'good design' ascribed to them, or are recognised as the work of well known designers are, without doubt, the most expensive. In many cases the price charged to the customer for what is obviously the most elementary manufacturing job is completely out of this world.

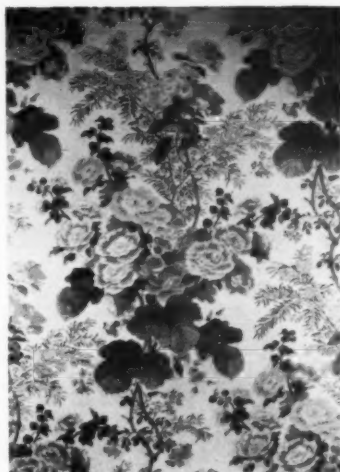
I have just finished making a standard lamp very similar to that depicted on page 38 of the March issue of DESIGN. Using the most primitive tools and without access even to a bench vice, the time involved was two to three hours, and the total cost £2.

An identical article is priced at a minimum of £7 in the shops. For manufacturing in quantity it would be fair to assume a cost for production of say £2 at the most, including overheads.

The furtherance of good design is indeed praiseworthy. But such extravagance (and there are many more examples) on the part of sales organisations using the name of good design can only rebound eventually to the discredit of the manufacturer and designer concerned.

It is surely in the interests of the CoID to make this situation quite clear.

C. WINSTANLEY
47 Gorham Drive
St. Albans



True or false?

This printed fabric, 'Hollyhock', is in the range of Turnbull & Stockdale Ltd, being reproduced from an 'original document' of about 1830. New blocks were made and the colour ways are new. Readers may remember our comments on the pattern (DESIGN August 1955 page 29): "Possibly the most beautiful chintz on the market The colouring is of an inexpressibly subtle combination of pinks and greys: it is impossible to imagine any period when this design could look anything but right." However, in 1852 Sir Henry Cole was of a different opinion: see caption on page 33.

School furniture

SIR: I read with interest Miss Sydney Foot's comments on school furniture in your recent issue (DESIGN February pages 14-18).

As a purchaser of specialist school furniture I must question her statement that "There is for example no one source of information on this subject" (i.e. standards of school furniture). Surely the British Standards Institution fills this alleged vacuum, and in support of my contention I would refer her to their excellent publication: 'School Furniture BS/MOE 11-22: 1950'. Within its 100 pages she will find specifications and line drawings of the full range of pupils' furniture, including items which she did not mention, for example low classroom cupboards suitable for juniors and infants, roller blackboards, metalwork and woodwork benches, needlework and craftwork tables. In fact the BSI booklet 'School Dining Tables and Chairs' is but a forerunner of a whole series of revised specifications covering the complete range of school furniture which is now under consideration by all the interested parties.

The fact that most authorities prefer to purchase standard production items from school furniture manufacturers rather than attempt to design their own units is I think mainly due to economic reasons. A standard single locker desk can be purchased

continued on page 53

INTERPLAY

Interplay and Interlace screen-printed tiles may be arranged in any number of different ways to make an endless variety of wall patterns. Moreover, the range offers a choice of colours that can often be effectively combined. Pilkington Interplays may be used with great success in schools, industrial premises, restaurants and public houses.

INTERLACE

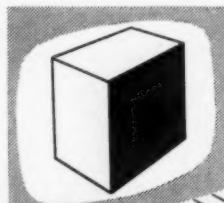
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Pattern No. 9321

Stacking chair in beech, mahogany or walnut
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Forceful presentation will help to sell your products, and our Design Division, backed by a modern plant, can assist in planning and producing cartons, outers, display material, etc, often from an entirely new angle but always aimed to sell . . . may we show you what we mean.



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and CULLINGTREE FACTORY BELFAST

continued from page 51

for £3 10s, whereas a similar desk built to a particular authority's design could cost up to 50 per cent more.

In connection with the purchase of furniture it must not be forgotten that although centrally there is only one Ministry of Works there are 146 autonomous county borough and county councils, each having an education committee and finance committee with varying ideas of what is desirable in the way of equipment.

J. L. COVERDALE
British Families Education Service
Headquarters, BFES,
BAOR 4, Germany

We asked Sydney Foott, who is in fact a member of the BSI committee on school furniture now redrafting the existing standard, to comment on Mr Coverdale's letter:

"In saying there is no one source of information on the subject of school furniture, I have in mind the work of the British Standards Institution. The BSI standard of 1950 is, in fact, under revision, and the purpose of the committee of which I am a member is to draft new standards for school furniture in the light of anthropometric and other data now available. In spite of the work of the BSI, there still remains the need for an operational research section which will combine consumer research in relation to current educational trends, keep records of foreign and overseas school furniture, and provide information regarding work in progress in this country."

Books

Technical Education, White Paper presented to Parliament by the Minister of Education and the Secretary of State for Scotland on March 1 1956, HMSO, 1s 6d

The White Paper describes a £90 million plan for greatly increasing both the quality and the quantity of technically qualified people available to industry. It emphasises the urgency of Britain's need to keep abreast of scientific and technical developments, to increase our productivity, and to maintain our share of the export market. The plan is on a scale commensurate with the gravity of the technological man power shortage and has been given absolute immunity against economy cuts. Perhaps it is uncharitable to suggest that in the light of the evidence contained in an appendix to the White Paper concerning current American, Russian and German superiority in the production of technical man power, the new British plan may well be starting 10 years too late.

The scheme follows nearly a decade of patient and determined work by the National and Regional Advisory Councils on Higher Technological Education which have unobtrusively achieved considerable improvement in the co-ordination of technical education, which is almost wholly a local

government affair and has been of patchwork quality. The Minister may prove to have made a serious mistake in adhering, against advice, to a policy of leaving the execution of the new plan to county education authorities. The proposed 24 colleges of advanced technology which are to be given near-university status will need to be administered under conditions of academic freedom and autonomy similar to those enjoyed by the universities under the Universities Grants Committee if they are to command the respect of the nation and to attract a sufficiently high calibre of staff and student material. Can this be ensured under local government administration?

Industrial design has not been mentioned, but since properly trained product designers contribute so directly and powerfully to the trading policies which the Government intends the White Paper to promote, there can be no doubt that the training of designers for industry must be included within the scope of the plan. The incorporation of one or two of our best schools of industrial design within the system of colleges of advanced technology might be the biggest single step which could be taken towards strengthening the position of British products in international markets.

L. BRUCE ARCHER

The Englishness of English Art, Nikolaus Pevsner, The Architectural Press, 16s

Many people, who did not hear Dr Pevsner's brilliant Reith Lectures, may seize on this excellent book in the hope that its eminent author will prove once and for all the validity of their wishful thinking, for one of the commonest and most cherished beliefs of British manufacturers and traders is that it should be possible for our present day designers to work in an international idiom, and yet produce things that are essentially and unmistakably British. Indeed several British manufacturers have already claimed as much for their contemporary productions, though when pressed they might find it difficult to isolate those qualities that prove their point.

They would not be alone in their difficulty, for Dr Pevsner himself, with all his erudition and his wealth of illustration, cannot make out his case without falling back on the dialectical dodge of 'polarities', by which Englishness is revealed through an assembly of opposites: rational - romantic; commonsensical - eccentric; fluidity - griddishness. As Robert Furneaux Jordan has pointed out, "by this system of polarities you can of course prove anything - the Englishness of everything English".

But this is not to suggest that the exercise is not worth trying. There are certain physical constants of climate and geography and there are certain attitudes of mind that do reappear throughout our history which must have their echo in artistic expression, though Dr Pevsner is careful to allow for the overriding influence of the spirit of an age, which may well obliterate for the time being the most persistent influences.

The hardest part of any analysis of national influences on design is to identify cause and effect. The temptation, from

which Dr Pevsner is scarcely immune, is to read backwards from the result to prove the cause; to do the reverse might reveal so many exceptions that the rule would be exposed as a tissue of loop-holes. But either way the examination of a nation's artistic expression is a worth while venture, if only to focus attention on past and present achievement. As another German born student of England, Dr Wilhelm Dibelius, has written, "nowhere have the forms of the past so tenaciously held on to the present". Dr Pevsner's fascinating survey shows at least that this was not always so and that variety of expression is as English as uniformity.

P.R.

The Engineer Centenary Number, January 1956, Morgan Bros, 15s

Few technical journals have lived to be a hundred. The 'Engineer' celebrates this occasion with a remarkable issue (452 pages) on whose cover superb Roman lettering by Reynolds Stone accompanies the Old English of the regular title. Inside, 26 experts survey progress in fields from management and labour to the growth of the concrete industry. They cover almost every aspect of engineering except design - which is mentioned in the caption to a picture of a vast drawing office.

The underlying purpose of engineering is to improve living conditions; as a reminder of this, a colour photograph of a living room appears on the last page but one. Its tasteless mixture of mediocre and modernistic suggests that there is still plenty of scope for the CoID.

As 325 pages of this monumental book are advertisements, it is fortunate that the design of much technical advertising has improved in recent years.

ALEC DAVIS

Ethiopia, A Cultural History, Sylvia Pankhurst, Lalibela House, 37s 6d

There are nearly 200 illustrations and sketches in Sylvia Pankhurst's 747 page study of the cultural history of Ethiopia, and most of these are of considerable interest. The text, however, will disappoint the serious student of Ethiopian arts and culture as much for its omissions as for its lack of objectivity and critical comment. The sections dealing with art and architecture are of most value and are clearly the result of considerable research, while those on education and crafts tend to be prolix and uninspired.

J. M. BENOY

The British Plastics Year Book, edited by Philip Morgan, Iliffe and Sons Ltd, 35s

The year book has been revised and extended this year. The contents include a review of recent patents, new companies registered in 1955, guides to plastics material suppliers, plastics product manufacturers, and plastics processors, a directory of trade and technical terms, and a 'who's who'.

Looking at Plastics, The Kingham Advertising Agency Ltd, 5s

H. F. Whitmarsh, director of Initial Plastics Ltd, has written a booklet defining the uses and manufacture of plastics. This

continued on page 55



Binders for your Design.

are now available attractively bound in vermilion line 1, DESIGN gold-blocked on front and spine and lined with black inside the covers

Two metal strips slide through the wire stitches. Each binder will hold 12 copies of DESIGN published after April 1954. BINDERS FOR DESIGN cost 12s 6d each, or 13s 6d post free from the Circulation Manager, DESIGN, 28 Haymarket, London SW1.



One of the four extra long panel radiators used to heat the galleries of the assembly hall at Kidbrooke Secondary School and below two of the Gulf Panels used as convectors on the main floor.

THE NURSEAL GROUP OF HEATING COMPANIES
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Head Office & Works: PENARTH RD., CARDIFF
Tel: 20591-2



continued from page 53

contains a short guide to methods of manufacture, and the properties of the various materials in use today. There is also a glossary of technical terms.

Simple Perspective Drawing, Arthur R. Brown, Crosby Lockwood & Son Ltd, 6s. The book is essentially a primer for the student and draughtsman. The basic problems of mechanical perspective drawing are discussed clearly and are illustrated by a series of simple examples.



Drawing by Brian Robb from 'Printer and Playground'

Oliver Simon

When Oliver Simon died in March, the printing industry may have reached the end of an era. It was his work at The Curwen Press between the wars which was almost entirely responsible for the re-appearance of the creative printer and the general raising of the design standards in printing and book production in Great Britain.

Oliver Simon was not born into a printer's family, but felt his way into the 'trade' after having been inspired by the Kelmscott 'Chaucer' in the window of a London bookshop. His father was in the textile industry in the north of England, and his many business contacts overseas meant much travel and a liberal education for Oliver. This background formed the many tastes and preferences of his later career. He joined The Curwen Press in 1919 for training under Harold Curwen, and the whole of his 35 years of business life was spent with the company.

In 1919 there was the general idea, fostered by William Morris and the Arts and Crafts Movement, that fine printing could only be produced by private presses. The printing trade was influenced to copy from these, but did not learn to adapt their quality and taste to its own circumstances. Oliver Simon saw this, and believed that the machine and the factory, if controlled, could also produce finely printed books and

what is more, produce them for a wide public. With his own particular skill he used mechanical composition in conjunction with the cylinder press to produce books equal in design and quality to those from private presses.

From his early association with Stanley Morison, Francis Meynell, and Bernard Newdigate arose first the magazine 'Fleurbaey' devoted to typography, and shortly afterwards, in 1924, the Double Crown Club which brought together a number of eminent artists, writers, publishers and printers, for discussion and criticism. The magazine and the club exerted an influence on the industry. It was gradually appreciated that good typography need not depend on the private press, but was equally applicable and more necessary to mechanical composition and automatic machinery. There was a dearth of good typefaces for the machine and the Monotype Corporation gradually introduced outstanding new and classical faces such as Baskerville, Garamond and Bembo. Curwen also brought over from the Continent several type faces including Walbaum which for some years were exclusive to the Press. In addition Oliver Simon commissioned such artists as Paul Nash, Percy Smith, Enid Marx and Eric Ravilious to design new borders and The Curwen Press was able to break from the traditional English border decoration of the preceding years. In his association with artists Simon endeavoured to combine their individual expression with good blocks and good printing, and at various times Bawden, Paul Nash, Sutherland, Ardizzone and Piper co-operated. New techniques for preparing working drawings and printing from them were devised with these artists.

The culmination of this development was the foundation and the career of the magazine 'Signature' which Oliver Simon started in 1935 and continued to produce, except for the war years, until 1953. There have probably been several magazines whose typography received some impetus from 'Signature' and it had a decided influence on general printing, advertising and book design.

Such high levels could only have been achieved by careful methods of working, long training and by Oliver Simon's stimulating leadership as chairman. His charming autobiography 'Printer and Playground' recently published by Faber and Faber (27s 6d) contains interesting information for printers and designers who are conscious of their responsibilities. An earlier book 'Introduction to Typography', first published in 1945, is today a standard textbook for typographical designers.

BERNARD UPTON

House of the future

The following manufacturers and suppliers were responsible for equipment used in the 'House of the Future' (pages 23-28): Refrigerator, ovens, saucepans, frypans, washing machines: The Hotpoint Electric Appliance Co Ltd. Bath, handbasins, etc in reinforced plastics: Bakelite Ltd (polyester resins), Fibromold Ltd (mouldings). Plastic chairs: Thermo-Plastics Ltd. Electrically

operated front door: Bolton Gate Co Ltd. 'Modernfold' doors: Home Fittings (Great Britain) Ltd. 'Tellaloud' loud speaking telephone: Winston Electronics Ltd. Front door telephone: Sterdy Telephones Ltd. Electrostatic dust collector: Air-Maze Ltd. Dishwasher, water heater, waste disposal unit, rotary ironer: The Hotpoint Electric Appliance Co Ltd. Nylon costumes, furnishings, bedclothes: commissioned by British Nylon Spinners Ltd. Costumes made and designed by Teddy Tinning. Bedclothes by Fryman & Fletcher Ltd. 'Warcite' work surfaces: Bakelite Ltd. Dunlopillo mattress: Dunlopillo Division, Dunlop Rubber Co Ltd. Water closet: Adamsez Ltd. Water taps and controls: Barking Brassware Co Ltd. Infra-red grill: Brattel Electric Co Ltd. Sewing machine: Transaco (GB) Ltd. Food mixer: Paladin Division, Barclay & Sons Ltd. Infra-red lamps: Philips Electrical Ltd. Aluminium foil: Venesta Ltd. Aluminium food containers: Platers & Stampers Ltd. Cosmetics: Max Factor, Hollywood & London (Sales) Ltd. Perfume: R. Demuth Ltd. Toilet preparations: Lenthier Ltd. Paper towel dispensers: Freeder Bros. Plastic toilet ware: Halex Ltd. Domestic earthenware: W. R. Midwinter Ltd. China: Harrods Ltd. Cutlery and glassware: Woolland Bros Ltd. Glass ovenware: The British Heat Resisting Glass Co Ltd. Cigarette lighter: Ronson Products Ltd. Food packaging: The Oppenheimer Casing Co (UK) Ltd, The Metal Box Co Ltd, Greenwich Plastics Co Ltd. Foods: Crosse & Blackwell Ltd, The English Jersey Cattle Society, Young's Potted Shrimps, J. Lyons & Co Ltd, New Zealand Dairy Products Marketing Commission, Hovis Ltd. 'Cellulone' Non-flam lacquer: Robert Kearsley & Co. Flower arrangements: Julia Clements.

Correction

DESIGN April page 53: the architect responsible for the design of the new cargo and passenger building at Southampton dock was C. B. Dromgoole, of the department of the dock's engineer, Southampton. Dr F. F. Curtis, architect to the British Transport Commission, acted as consultant.

Designers in this issue

Anthony Adams (20). John Aldridge, MSIA (47). Carlo Berghinz (17). David Caplan, MSIA (45). Kathleen Darby, MSIA (22, 23). Marion Dorn (35). C. B. Dromgoole, LRIBA (55). Freeman Fox & Partners (17). Kenneth Garland (Art Editor). Sir William Halcrow & Partners (17). Peter Hatch, MSIA (cover). Hans H. Henriksen (40). Willi Herrman (36). Samuel Horwitz (20). Jack Howe, FRIBA, FSA (47). Finn Juhl (38, 41). R. M. Kay, BSC (51). Jock Kinneir, MSIA (49). H. Kofod-Larsen (41). Louis Le Brocqy (36). D. Lee DuSell (19). Françoise Lelong (36). Lutyens & Greenwood, FRIBA (22). Enid Marx, RDI, FSA (35, 55). Robert Mabon (47). David Mellor, DESRCA (47). Robert Nicholson, MSIA (33). Roger Nicholson, ARCA, MSIA (33). Harold Nielsen (40). Vivien Pilley, FRIBA, MSIA (45). Gilbert Roberts (17). A. Rothholz, MSIA (23). M. O. Rowlands (47). Daniel R. Shannon (45). Peter E. M. Sharp, ACGI, BSC(Eng), AMIIE (44). Alison Smithson, ARIBA, Dip Arch (9, 25). Peter Smithson, ARIBA (9, 25). Raymond Spilman (42). R. H. Treleaver (45). F. C. Wray (51).

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RECORD OF DESIGNERS

MANUFACTURERS requiring the services of designers, whether for staff positions or in a consultant capacity, are invited to apply to the Record of Designers, CoID, London, or to the CoID, Scottish Committee, 95 Bothwell Street, Glasgow, G2. They can obtain a short list of designers suitable to their particular purposes, which should be explained in some detail. This service is free to British manufacturers and incurs no obligation.

SITUATIONS VACANT

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-50 inclusive unless he or she, or the employment, is excepted from the provisions of the Notification of Vacancies Order, 1952.

THE COUNCIL OF INDUSTRIAL DESIGN requires an Exhibitions display assistant preferably with art school training and some display experience. Salary for men £475 to £605 rising to £780, women £442 to £540 rising to £780 according to age and experience. Please write full particulars of age, education, posts held with dates to The Establishment Officer, 28 Haymarket, London SW1.

THE COAL UTILISATION Council requires a Display Officer for Scotland and the North of England to be based in Glasgow. Only men with real creative ability, exhibition and showroom display experience able to prepare specifications and detailed working drawings for contractors will be considered. Car supplied: must be experienced driver. Commencing salary £650 p.a. Permanent and pensionable post. Write full details to the Publicity Officer, C.U.C. 3 Upper Belgrave Street, London SW1.

DESIGNER. Pel Ltd, Rood End Rd, Oldbury, Birmingham, invite applications as ASSISTANT DESIGNER STYLIST for range of their products. This attractive post calls for minimum qualifications national diploma in design or equivalent standard, with ability to originate designs and detail designs from sketches. Salary according to experience and qualifications. National Service must have been completed. Staff pension scheme, canteen and welfare, etc.

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CHIEF DESIGNER, experienced in Mechanical and Electrical Engineering and preferably holding a University degree, required by Morley Products (Padiham) Ltd. The post entails responsibility for the design and development of domestic washing appliances and of prototypes. Please write giving age, experience, qualifications and salary required to The Managing Director, Morley Products Ltd, Victoria Works, Padiham, Lancs. A pension scheme is in operation.

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INTENDING EXHIBITORS at Overseas Fairs should contact DAVIS TURNER & CO LTD for free guidance. Specialists in packing and shipping Exhibits and Stands. Phone sloane 3455 or write to 4 Lower Belgrave Street, London SW1, quoting Ref UX 680.

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TWO QUALIFIED DESIGNERS, AMIED/MSIA are willing to undertake the appearance and mechanical design of projects in the field of light engineering. Box 189, DESIGN, 28 Haymarket, London SW1.

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PICTURE FRAMES available in all sizes. Special design and finishes made to order. Mounts cut in a fine range of new colours. The Rowley Gallery, 87 Campden Street, off Kensington Church Street, W8. PARK 4349.

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